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NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 3 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 4 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents
NEWS 5 AUG 20 CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 6 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7 AUG 27 USPATOLD now available on STN
NEWS 8 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10 SEP 13 FORIS renamed to SOFIS
NEWS 11 SEP 13 INPADOCDB enhanced with monthly SDI frequency
NEWS 12 SEP 17 CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13 SEP 17 CAplus coverage extended to include traditional medicine patents
NEWS 14 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15 OCT 02 CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16 OCT 19 BEILSTEIN updated with new compounds
NEWS 17 NOV 15 Derwent Indian patent publication number format enhanced
NEWS 18 NOV 19 WPIX enhanced with XML display format
NEWS 19 NOV 30 ICSD reloaded with enhancements
NEWS 20 DEC 04 LINPADOCDB now available on STN
NEWS 21 DEC 14 BEILSTEIN pricing structure to change

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 NEWS 22  DEC 17  USPATOLD added to additional database clusters
 NEWS 23  DEC 17  IMSDRUGCONF removed from database clusters and STN
 NEWS 24  DEC 17  DGENE now includes more than 10 million sequences
 NEWS 25  DEC 17  TOXCENTER enhanced with 2008 MeSH vocabulary in
                  MEDLINE segment
 NEWS 26  DEC 17  MEDLINE and LMEDLINE updated with 2008 MeSH
vocabulary
 NEWS 27  DEC 17  CA/CAplus enhanced with new custom IPC display
formats
 NEWS 28  DEC 17  STN Viewer enhanced with full-text patent content
                  from USPATOLD
 NEWS 29  JAN 02  STN pricing information for 2008 now available

 NEWS EXPRESS  19 SEPTEMBER 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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FILE 'HOME' ENTERED AT 21:22:32 ON 03 JAN 2008

=> FIL BIOSIS CAPLUS EMBASE
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE 'EMBASE' ENTERED AT 21:22:42 ON 03 JAN 2008
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=> s bone particle
L1          97 BONE PARTICLE

=> s l1 and immobil?
L2           3 L1 AND IMMOBIL?

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           3 DUP REM L2 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L3   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2003:796407  CAPLUS
DN   139:312490
TI   Method of making bone particles using immobilization media
IN   Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.;
Daugherty, Mark
     P.
PA   Osteotech, Inc., USA
SO   PCT Int. Appl., 29 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.
DATE
     ---------------     ----   --------    --------------------
--------
PI   WO 2003082159        A1    20031009    WO 2003-US9878
20030331
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,
OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR,
TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI,
SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
TD, TG
     CA 2480636           A1    20031009    CA 2003-2480636
20030331
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AU 2003228417 A1 20031013 AU 2003-228417
20030331
EP 1494624 A1 20050112 EP 2003-726166
20030331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
SK
US 2006024656 A1 20060202 US 2005-509585
20050725
PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331
AB The present invention relates to a method for making bone
particles from
bone of a variety of sizes and a workpiece forming and holding
device for
use with the method. The workpiece forming device includes a
base and a
base frame attached to the surface of the base. An apparatus
for forming a
solidified mass of bone and immobilization medium is also
provided which includes the workpiece forming device and a
detachable
former member enclosing the base frame. Bone is immersed in an
immobilization medium within such workpiece forming device, which
is solidified to form a solidified mass of bone and
immobilization
medium and then subdivided to provide particles of bone in
association with
immobilization medium. The immobilization medium may be
optionally removed to leave bone particles suitable for use in
orthopedic
applications including implants.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1993:164208 CAPLUS
DN 118:164208
TI Effect of substrate presoaking treatment of support materials on
the
activity of immobilized glucoamylase
AU Mukataka, Sukekuni; Negishi, Satoshi; Sato, Seigo; Takahashi,
Joji
CS Inst. Appl. Biochem., Univ. Tsukuba, Tsukuba, Japan
SO Enzyme and Microbial Technology (1993), 15(3), 229-33
CODEN: EMTED2; ISSN: 0141-0229
DT Journal
LA English
AB The activity of immobilized glucoamylase was remarkably
increased by presoaking treatment of the supports in soluble
starch solution

Pig bone (PB) particles-100 showed the largest substrate presoaking effect among some representative support materials, increasing the activity of immobilized glucoamylase 10 fold. The improvement in the activity was due to an increase in the specific activity of the immobilized enzyme. In order to get sufficient substrate presoaking effect, a rapid crosslinking treatment of the enzyme and the substrate-presoaked support was required. The glucoamylase immobilized on PB sheet was very stable and gave a high starch hydrolysis of DE95 (dextrose equivalent) for about 1 mo in continuous process.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1991:38433 CAPLUS
DN 114:38433
TI Substrate presoaking effect on immobilization of protease on pig bone particles
AU Negishi, Satoshi; Sato, Seigo; Mukataka, Sukekuni; Takahashi, Joji
CS Inst. Appl. Biochem., Univ. Tsukuba, Tsukuba, 305, Japan
SO Journal of Fermentation and Bioengineering (1990), 70(5), 313-16
CODEN: JFBIEX; ISSN: 0922-338X
DT Journal
LA English
AB When pig bone (PB) particles and other support materials were presoaked in casein solution and crosslinked with glutaraldehyde, the activity of immobilized protease, was two or more times greater than those of the proteases immobilized on non-treated supports. Chitopearl was an exception. The highest activity, 25,000 U/g-support, was obtained with the presoaked PB particles. The effect of presoaking the supports in the substrate solution on the immobilized protease was also observed with other protein substrates. The effect of the presoaking treatment increased with an increase in the mol. weight of the protein. The increase in the activity of the immobilized enzyme was due to increases in both the amount of adsorbed protease and specific activity. Furthermore, the stability of protease immobilized on PB was remarkably improved by transforming the PB particles into a sheet.

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=> d his

     (FILE 'HOME' ENTERED AT 21:22:32 ON 03 JAN 2008)

     FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 21:22:42 ON 03 JAN 2008
L1            97 S BONE PARTICLE
L2             3 S L1 AND IMMOBIL?
L3             3 DUP REM L2 (0 DUPLICATES REMOVED)

=> s l1 and (water or ethanol or acid)
L4           37 L1 AND (WATER OR ETHANOL OR ACID)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5           25 DUP REM L4 (12 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):y

L5   ANSWER 1 OF 25  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2007:163020  CAPLUS
DN   147:58151
TI   Biodisc tissue-engineered using PLGA/DBP hybrid scaffold
AU   Ko, Youn Kyung; Kim, Soon Hee; Jeong, Jae Soo; Ha, Hyun Jung;
Yoon, Sun
     Jung; Rhee, John M.; Kim, Moon Suk; Lee, Hai Bang; Khang, Gilson
CS   BK-21 Polymer BIN Fusion Research Team, Chonbuk National
University,
     Jeonju, 561-756, S. Korea
SO   Polymer (Korea) (2007), 31(1), 14-19
     CODEN: POLLDG; ISSN: 0379-153X
PB   Polymer Society of Korea
DT   Journal
LA   Korean
AB   Demineralized bone particle (DBP) has been used as one
     of the powerful inducers of bone and cartilage tissue
specialization.  In
     this study, we fabricated DBP/PLGA scaffold for tissue
engineered disk
     regeneration.  We manufactured dual-structured scaffold to
compose inner
     cylinder and outer doughnut similar to nature disk tissue.  The
DBP/PLGA
     scaffold was characterized by porosity, wettability, and water
     uptake ability.  We isolated and cultured nucleus pulposus (NP)
and
     annulus fibrosus (AF) cells from rabbit intervertebral disk.  We
seeded NP
     cells into the inner core of the hybrid scaffold and AF cells
into the
     outer portion of it.  Cellular viability and proliferation were
assayed by
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3-(4,5-dimethylthiazole-2-yl)-2,5-diphenyltetrazolium-bromide (MTT) test.
PLGA and PLGA/DBP scaffolds were implanted in s.c. of athymic nude mouse
to observe the formation of disk-like tissue in vivo. And then we observed
change of morphol. and hematoxylin and eosin (H&E). Formation of
disk-like tissue was better DBP/PLGA hybrid scaffold than control.
Specially, we confirmed that scaffold impregnated 20 and 40% DBP affected
to proliferation of disk cell and formation of disk-like tissue.

L5 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:597345 CAPLUS
DN 145:61836
TI Continuous enzymic degradation of eel processing wastes to recover useful
materials
IN Kagami, Hideto; Tominaga, Kenji
PA Fukuoka Yoman K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006158263	A	20060622	JP 2004-352782	20041206

PRAI JP 2004-352782 20041206
AB The method comprises (1) a step to mix backbones, heads, viscera, etc., as
eel processing wastes with proteases and remove solid from the degradation
products with a solid-liquid separator, (2) a step to sep. the liquid into
light liquid containing fats/oils and heavy liquid containing water-soluble
proteinaceous components upon centrifugation, (3) a step to treat the
heavy liquid with a pore diffusion-type membrane separator to diffuse
low-mol.-weight components such as peptides and amino acids into
water for separation of ≥50,000-mol.-weight components such as the
proteases, unreacted proteins, etc. and ≥20 nm-diameter particles and
concentrate the peptides and the amino acids, and (4) a step to recycle the

proteases and unreacted proteins to the step (1) after concentration if necessary. Thus, minced eel backbones and Aroase XA 10 (protease) solution were continuously fed to a degradation tank at 65-68°, the degradation product was separated into bone particles and liquid with a vibrating screen, and the liquid was separated into an oil layer containing DHA, EPA, CoQ10, etc. and an aqueous layer. The aqueous layer was treated with a flat membrane (average pore size 17 nm, porosity 60%, thickness 300 μm), and water, into which the reaction products (peptides) were diffused from the aqueous layer, was concentrated with a regenerated cellulose membrane (average pore size 2 nm, porosity 30%, thickness 15 μm). A fraction, which contained the protease and unreacted proteins and was not diffused through the flat membrane, was concentrated with a hollow-fiber membrane and recycled to the enzymic degradation step.

L5 ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 1
AN 2006:401402 BIOSIS
DN PREV200600393692
TI Factors affecting stiffness properties in impacted morsellized bone used in revision hip surgery: An experimental in vitro study.
AU Fosse, Lars [Reprint Author]; Ronningen, Helge; Benum, Pal; Lydersen, Stian; Sandven, Rolf B.
CS Norwegian Univ Sci and Technol, Norwegian Orthoped Implant Res Unit, N-7034 Trondheim, Norway
lars.fosse@ntnu.no
SO Journal of Biomedical Materials Research, (AUG 2006) Vol. 78A, No. 2, pp. 423-431.
ISSN: 1549-3296. E-ISSN: 1552-4965.
DT Article
LA English
ED Entered STN: 9 Aug 2006
Last Updated on STN: 9 Aug 2006
AB When revising loosened joint prosthesis, impacted morsellized bone is frequently used as organic scaffolding. We studied the relative influence that different bone particle size, impaction energy,

and liquid content had on impacted bone stiffness. Bovine bone was morsellized in a bone mill by three grinding drums to produce bone with different chip size distribution. Next, portions of bone chips of controlled sizes were produced by a five-leveled sieve. Layer by layer of bone are constructed into pellets by our experimental impaction method. This method allows us to vary one independent factor at a time in a controlled manner while keeping the other factors constant. Stiffness for all bone pellets were measured during impaction and loading. In earlier studies, we focused on how impaction force, number of impaction strokes, and bone liquid contents influence mechanical behavior. Here, we compare the outcome of all studies using general linear models. All five factors significantly contribute to stiffness of impacted morsellized bone. Changing bone moisture has major, while increasing the number of impaction strokes beyond five per layer has minor effect. Low water content is the main contributor to highest load stiffness. Optimal stability of impacted morsellized bone is achieved with dried and well-graded particles. The number of heavy impaction strokes can be restricted. (c) 2006 Wiley Periodicals, Inc.

L5 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2006:100891 BIOSIS
DN PREV200600106418
TI Mortadella sausage formulations with partial and total replacement of beef and pork backfat with mechanically separated meat from spent layer hens.
AU Trindade, Marco A. [Reprint Author]; Contreras, Carmen C.; De Felicio, Pedro E.
CS Univ Estadual Campinas, Dept Food Technol, POB 6121, Campinas, SP, Brazil
trindademarco@aol.com
SO Journal of Food Science, (APR 2005) Vol. 70, No. 3, pp. S236-S241.
CODEN: JFDSAZ. ISSN: 0022-1147.
DT Article

LA English
ED Entered STN: 8 Feb 2006
Last Updated on STN: 8 Feb 2006
AB Mortadella sausages were formulated with 0%, 20%, 40%, 60%, 80%, and 100%
mechanically separated layer hen meat (MSLM) replacing the beef and pork
backfat as raw materials. Treatments were compared by determination of
shear force, sensory acceptance, and stability during cold storage
(microbial analysis, thiobarbituric acid-reactive substances
[TBARS], color, and descriptive sensory analysis). Mortadella with higher
MSLM presented lower shear force values. TBARS index and sensory
rancidity were not affected. The greater the amounts of MSLM used, the
paler was the pink color observed in the sensory evaluations and the lower
were the CIE a* values. All treatments presented minimal increase in the
microbiological counts evaluated during storage. The limiting factor in
the acceptance of the product was the perception of bone particles in
mortadella containing 60% or more MSLM.

L5 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:515684 CAPLUS
DN 141:59805
TI Formable and settable polymer bone composite and method of production
thereof
IN Winterbottom, John M.; Kaes, David
PA Osteotech, Inc., USA
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004053112	A1	20040624	WO 2003-US39704	20031212
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,				

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2510420 A1 20040624 CA 2003-2510420 20031212

AU 2003297929 A1 20040630 AU 2003-297929 20031212

EP 1578957 A1 20050928 EP 2003-797000 20031212

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2006509539 T 20060323 JP 2004-558203 20031212

PRAI US 2002-432968P P 20021212

WO 2003-US39704 W 20031212

AB The osteoimplant composite comprises a polymer and bone-derived particles.
The composite is adapted and constructed to be formable during or immediately prior to implantation and to be set after final surgical
placement. For example, pellets of starch poly(caprolactone) were placed
in a microwave oven and heated to .apprx.54.4°, then pressed
together by hand to form a larger mass of polymer. Before the polymer
cooled, partially demineralized bovine bone particles were folded into the
polymer until the polymer contained .apprx. 50% of bone particles. The
composite was then heated and formed into a desired final shape. The
composite could be repeatedly heated and reshaped. Once formed, the
composite was subjected to approx. 10 heating/cooling cycles with no
observable degradation of handling or setting properties.

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:333614 CAPLUS
DN 140:327165

TI Coupling agents for orthopedic composite biomaterials
IN Shimp, Lawrence A.; Knaack, David
PA Osteotech, Inc., USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004032988	A2	20040422	WO 2003-US31990	20031008
WO 2004032988	A3	20040527		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2501822	A1	20040422	CA 2003-2501822	20031008
AU 2003277325	A1	20040504	AU 2003-277325	20031008
US 2005008620	A1	20050113	US 2003-681651	20031008
US 7270813	B2	20070918		
EP 1549359	A2	20050706	EP 2003-808189	20031008
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI US 2002-416904P	P	20021008		
WO 2003-US31990	W	20031008		

AB The invention provides a method for the preparation of bone-polymer composites
wherein the mineral portion of the bone is treated with a coupling agent,

e.g., a silane, a zirconate, or a titanate, before being incorporated into
a biocompatible polymeric matrix. The resulting composites may be used as
such or be further processed to form an osteoimplant.

L5 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:796407 CAPLUS
DN 139:312490
TI Method of making bone particles using immobilization media
IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.; Daugherty, Mark
P.
PA Osteotech, Inc., USA
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003082159	A1	20031009	WO 2003-US9878	20030331
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2480636	A1	20031009	CA 2003-2480636	20030331
AU 2003228417	A1	20031013	AU 2003-228417	20030331
EP 1494624	A1	20050112	EP 2003-726166	20030331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
US 2006024656 A1 20060202 US 2005-509585 20050725
PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331
AB The present invention relates to a method for making bone particles from bone of a variety of sizes and a workpiece forming and holding device for use with the method. The workpiece forming device includes a base and a base frame attached to the surface of the base. An apparatus for forming a solidified mass of bone and immobilization medium is also provided which includes the workpiece forming device and a detachable former member enclosing the base frame. Bone is immersed in an immobilization medium within such workpiece forming device, which is solidified to form a solidified mass of bone and immobilization medium and then subdivided to provide particles of bone in association with immobilization medium. The immobilization medium may be optionally removed to leave bone particles suitable for use in orthopedic applications including implants.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:439516 CAPLUS
DN 139:31744
TI Gene transfer to bone tissues via particle gun and application to gene therapy for cartilage loss
IN Moriya, Hideshige; Wada, Yuichi
PA Seikagaku Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003164289	A	20030610	JP 2001-367091	20011130
CA 2407302	A1	20030530	CA 2002-2407302	20020927

US 2003108531 A1 20030612 US 2002-262526
20020930
PRAI JP 2001-367091 A 20011130
AB A gene for transfection into bone tissues via gene gun (particle
gun), is
disclosed. Preferably, hyaluronan synthase, more specifically,
hyaluronan
synthase-2 (Has2) coding gene is introduced into periosteum or
cartilage
tissue to be used for transplantation. A kit for gene transfer,
comprising a gene and a carrier/support, is claimed.
Introduction of lacZ
gene and Has2 gene into periosteum using gold particle gene gun,
and
transplantation to cartilage deficient part of joint in rabbit,
are
described.

L5 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:595358 CAPLUS
DN 137:145651
TI Compositions, methods, and kits for closure of lumen openings,
and for
bulking of tissue
IN Wironen, John F.; Donda, Russell S.
PA USA
SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U. S. Ser. No.
776,404.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002106411	A1	20020808	US 2001-865318	20010525
US 2002107429	A1	20020808	US 2001-776404	20010202
US 6685626	B2	20040203		
US 2002176893	A1	20021128	US 2001-16602	20011022
WO 2002062404	A2	20020815	WO 2002-US3107	20020131
WO 2002062404	A3	20030626		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE,
GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS,

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2002240228 A1 20020819 AU 2002-240228 20020131
PRAI US 2001-776404 A2 20010202
US 2001-865318 A2 20010525
US 2001-16602 A 20011022
WO 2002-US3107 W 20020131
AB Disclosed and claimed are compns., devices, methods and kits that are
useful in occluding lumens or bulking-up regions of tissues or organs in a
living mammal. The invention pertains to a composition containing specific
particulate components, wherein the particulates promote responsive body
processes that contribute to the formation of the occlusion or bulked-up
region. The particulate, e.g. hydroxyapatite is mixed with a carrier,
e.g. glatin, and is applied to a lumen or other body region in need of
closure to form occlusion (no data).

L5 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:871401 CAPLUS
DN 137:114438
TI Preparation and characterization of demineralized bone
particle impregnated poly(L-lactide) scaffolds
AU Khang, Gilson; Park, Chong Soo; Rhee, John M.; Lee, Sang Jin; Lee, Young
Moo; Choi, Myoung Kyu; Lee, Hai Bang; Lee, Ilwoo
CS Department of Polymer Science and Technology, Chonbuk National University,
Jeonju, 561-756, S. Korea
SO Korea Polymer Journal (2001), 9(5), 267-276
CODEN: KPJOE2; ISSN: 1225-5947
PB Polymer Society of Korea
DT Journal
LA English
AB In order to endow with new bioactive functionality from demineralized

bone particle (DBP) as natural source to poly(L-lactide) (PLA) synthetic biodegradable polymer, porous DBP/PLA as natural/synthetic composite scaffolds were prepared and compared by means of the emulsion freeze drying and solvent casting/salt leaching methods for the possibility of the application of tissue engineered bone and cartilage. For the emulsion freeze drying method, it was observed that the pore size decreased in the order of 79μm (PLA control) > 47 μm (20% of DBP) > 23 μm (40% of DBP) > 15 μm (80% of DBP). Porosities as well as specific pore areas decreased with increasing the amount of DBP. It can be explained that DBP acts like emulsifier resulting in stabilizing water droplet in emulsion. For the solvent casting/salt leaching method, a uniform distribution of well interconnected pores from the surface to core region were observed the pore size of 80 - 70 μm independent with DBP amount Porosities as well as specific pore areas also were almost same. For pore size distribution by the mercury intrusion porosimeter anal. between the two methods, the pore size distribution of the emulsion freeze drying method was broader than that of the solvent casting/salt leaching method due to the mechanism of emulsion formation. Scaffolds of PLA alone, DBP/PLA of 40 and 80%, and DBP powder were implanted on the back of athymic nude mouse to observe the effect of DBP on the induction of cells proliferation by hematoxylin and eosin staining for 8 wk. It was observed that the effect of DBP/PLA scaffolds on bone induction are stronger than PLA scaffolds, even though the bone induction effect of DBP/PLA scaffold might be lowered than only DBP powder, that is to say, in the order of DBP only > DBP/PLA scaffolds of 40 and 80% DBP > PLA scaffolds only for osteoinduction activity. In conclusion, it seems that DBP plays an important role for bone induction in DBP/PLA scaffolds for the application of tissue engineering area.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 2
AN 1999:225886 BIOSIS
DN PREV199900225886
TI Supplemental citric acid and particle size of fish bone-meal influence the availability of minerals in rainbow trout Oncorhynchus mykiss (Walbaum).
AU Vielma, J. [Reprint author]; Ruohonen, K.; Lall, S. P.
CS Laukaa Fisheries Research and Aquaculture, Finnish Game and Fisheries Research Institute, FIN-41360, Valkola, Finland
SO Aquaculture Nutrition, (March, 1999) Vol. 5, No. 1, pp. 65-71. print.
ISSN: 1353-5773.
DT Article
LA English
ED Entered STN: 17 Jun 1999
Last Updated on STN: 17 Jun 1999
AB Juvenile rainbow trout Oncorhynchus mykiss (Walbaum) were fed six low-phosphorus (P) diets supplemented with two different sizes of ground fish bone-meals (fine, 68 mum or less; coarse, 250-425 mum) and a coarse bone-meal diet containing four levels of citric acid (0, 4, 8 or 16 g kg-1 diet) to investigate the effects of pH and bone particle size on P bioavailability. The basal diet provided 3.4 g P kg-1 and bone-meal increased P contents to 5.4-6.0 g P kg-1. Coarse bone-meal diets supplemented with 0, 4, 8 or 16 g kg-1 of citric acid had pH values of 6.0, 5.7, 5.4 and 5.0, respectively. Weight gain and whole-body water, protein and lipid contents were not influenced by bone-meal supplementation. Supplementing the basal diet with both coarse and fine bone-meal significantly increased whole-body ash content. Fish fed no bone-meal were hypophosphataemic compared with fish fed with either fine or coarse bone-meals. Phosphorus in fine bone-meal had higher availability than P in coarse bone-meal. Bone-meal supplementation significantly decreased whole-body manganese content from 8.9 mug g-1 in fish fed no bone-meal to 2.3 and 4.5 mug g-1 in fish fed with fine and coarse bone-meals, respectively. The concentration of magnesium increased but zinc concentration was not affected by bone-meal

supplements. Citric acid increased whole-body ash content but the influence of citric acid on the body P content was not significant (P = 0.07). Dietary acidification by citric acid significantly increased whole-body iron in a linear fashion. The bioavailability of dietary P can be improved by fine grinding the bone in
fish meals.

L5 ANSWER 12 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 3
AN 1998:88897 BIOSIS
DN PREV199800088897
TI Inhibition of avian osteoclast bone resorption by monoclonal antibody
121F: A mechanism involving the osteoclast free radical system.
AU Collin-Osdoby, Patricia; Li, Li; Rothe, Linda; Anderson, Fred; Kirsch,
David; Oursler, Merry Jo; Osdoby, Philip [Reprint author]
CS Dep. Biol., Box 1229, Washington Univ., St. Louis, MO 63130, USA
SO Journal of Bone and Mineral Research, (Jan., 1998) Vol. 13, No. 1, pp.
67-78. print.
CODEN: JBMREJ. ISSN: 0884-0431.
DT Article
LA English
ED Entered STN: 25 Feb 1998
Last Updated on STN: 25 Feb 1998
AB Osteoclasts generate high levels of superoxide anions during bone resorption that contribute to the degradative process, although excessive
levels of this free radical may be damaging. One mechanism for their
removal is via superoxide dismutase (SOD), a protective superoxide
scavenging enzyme. We have previously described a novel developmentally
regulated 150 kDa plasma membrane glycoprotein of avian osteoclasts which
is reactive with the osteoclast-specific monoclonal antibody (Mab) 121F
and is related immunologically, biochemically, and in protein sequence to
mitochondrial Mn2+/Fe2+ SOD. We hypothesized that this unusual osteoclast
surface component may be involved in protection against superoxides
generated during active bone resorption. Increasing concentrations of
monovalent Fab fragments prepared from Mab 121F, but not those from
another antiosteoclast Mab designated 29C, markedly inhibited both

bone particle and bone pit resorption by avian osteoclasts, while reducing tartrate resistant acid phosphatase activity and causing the morphological contraction of osteoclasts on bone.

Thus, the SOD-related membrane antigen may be essential for osteoclast bone resorption. Osteoclast superoxide production, monitored kinetically by cytochrome c reduction and histochemically by nitroblue tetrazolium reduction staining, was significantly greater in the presence of 121F, but not 29C, Fab treatment. Furthermore, the release of another free radical known as nitric oxide, which is produced by osteoclasts, can scavenge superoxides, and acts to potently inhibit osteoclast bone resorption, was dose-dependently increased by 121F Fab in resorbing osteoclast cultures.

Therefore, Mab 121F binding may block the potential protective function of the osteoclast plasma membrane SOD-related glycoprotein, leading to a rapid elevation of superoxide levels and a subsequent rise in osteoclast nitric oxide release, feedback messages which may be sensed by the osteoclast as signals to cease active bone resorption.

L5 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:107400 CAPLUS
DN 126:122510
TI Modified osteogenic materials comprising collagen and demineralized bone particles
IN Jefferies, Steven R.
PA Biocoll Laboratories, Inc., USA
SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9639203	A1	19961212	WO 1996-US9749	19960606

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
SE, SG
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
CA 2222626 A1 19961212 CA 1996-2222626 19960606
AU 9661074 A 19961224 AU 1996-61074 19960606
EP 851772 A1 19980708 EP 1996-918400 19960606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
CN 1192700 A 19980909 CN 1996-196049 19960606
MX 9709909 A 20040823 MX 1997-9909 19971208
PRAI US 1995-469982 A 19950606
WO 1996-US9749 W 19960606
AB An osteogenic process and product comprise collagen and demineralized bone
particles. The product may contain a maximum of 20% by weight inorg. materials.
The product may be densified by compression. Addnl. osteogenic factors,
mitogens, drugs or antibiotics may be incorporated therein. Inorg.
materials may be bound to the organic matrix via precoating with a calcium or
hydroxyapatite binding protein, peptide or amino acid. The
materials also display long lasting drug release characteristics. The
process and resultant composition increases the rate and predictability of
osteoinduction by demineralized bone matrix. In particular, this
invention relates to compns. of demineralized bone and calcium or other
mineral salts which exhibit enhanced osteogenic potential. The osteogenic
compns. comprise between about 60% to 90% demineralized bone and compns.
comprising a carrier and alkaline phosphatase capable of inducing bone-like
structures. Thus, 10 g of demineralized bone matrix was milled to a
uniform particle size ranging 75-400μm. The particles were immersed in
a solution of 0.05% glutaraldehyde in neutral phosphate buffered isotonic

saline for 12 h with constant agitation at 4°, then filtered, washed,
dried and sterilized. These activated particles may be placed directly in
an osseous defect or complexed with an organic biopolymer and used.

L5 ANSWER 14 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 4
AN 1995:404159 BIOSIS
DN PREV199598418459
TI Degradation of subcutaneous implants of bone particles from normal and
warfarin-treated rats.
AU Serre, C. M. [Reprint author]; Price, P.; Delmas, P. D.
CS INSERM Res. Unit 403, Fac. Med. Alexis Carrel, 69372 Lyon Cedex 08, France
SO Journal of Bone and Mineral Research, (1995) Vol. 10, No. 8, pp. 1158-1167.
CODEN: JBMREJ. ISSN: 0884-0431.
DT Article
LA English
ED Entered STN: 27 Sep 1995
Last Updated on STN: 27 Sep 1995
AB Osteoclasts are multinucleated cells specific to bone tissue and of
hemopoietic origin. They are formed by fusion of mononucleated cells in a
manner related to the formation of macrophage polykarions. Subcutaneous
implantation of mineralized bone particles induces multinucleated giant
cell recruitment. There is controversy, however, about the nature of
these cells. Although subcutaneous implantation of bone particles derived
from warfarin-treated animals has been applied as an in vivo model to
study the role of osteocalcin in bone resorption, the exact nature of
multinucleated cells elicited in this model is still unclear. In this
paper, subcutaneous implants of bone particles from normal and
warfarin-treated rats were implanted in Sprague-Dawley rats. Resorption
was assessed in 12 and 16 day implants by chemical analysis (calcium
content) and by histomorphometric measurement of the bone
particle area and the number of multinucleated and
tartrate-resistant acid phosphatase-positive cells. No
significant difference in calcium content and bone area were observed,

after 12 or after 16 days of implantation, between implants from normal
and warfarin-treated rats. The number of tartrate-resistant acid phosphatase-positive cells elicited by bone particles represented less
than 25% of the number of multinucleated cells and did not differ between
bone particles from normal and warfarin-treated rats. By electron
microscopy, a majority of multinucleated cells did not show a ruffled
border in contact with bone particles, and their morphological features
were suggestive of a foreign body giant cell reaction. In our experience
this model appears to elicit only a few osteoclasts among multinucleated
macrophagic cells and may not be the most appropriate one for the study of
resorption of normal or osteocalcin-depleted bone.

L5 ANSWER 15 OF 25 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights
reserved on STN
AN 1995207008 EMBASE
TI Biochemical analysis of heterotopic ossification in spinal cord injury
patients.
AU Chantraine A.; Nusgens B.; Lapiere C.M.
CS A. Chantraine, Div. Medecine Physique Reeducation, Hopital Cantonal
Universitaire, Beau-Sejour, 1211 Geneve 14, Switzerland
SO Paraplegia, (1995) Vol. 33, No. 7, pp. 398-401.
ISSN: 0031-1758 CODEN: PRPLBL
CY United Kingdom
DT Journal; Article
FS 033 Orthopedic Surgery
008 Neurology and Neurosurgery
LA English
SL English
ED Entered STN: 27 Jul 1995
Last Updated on STN: 27 Jul 1995
AB Heterotopic ossification (HO) represents a frequent complication in spinal
cord injury (SCI) patients. Samples of HO taken from SCI patients were
studied and compared to normal bone. We used a procedure of bone particle fractionation (according to their degree of
mineralisation) which allowed us to establish a profile reflecting the
metabolic remodelling of bone and to analyse the organic matrix of the

newly synthesised tissue. In paraplegic patients, we noted that there was
a large increase of the proportion of a degree of calcified bone in the HO
as we had previously observed in cortical as well as in cancellous bone of
the same patients. Based on aminoacid analyses, we observed in the newly
synthesised organic matrix of HO a decreased proportion of hydroxyprolyl
residues resulting either from an alteration of the prolyl hydroxylation
or from the presence of an excess of non-collagen polypeptides. These
results are similar to those seen in sublesional bone of the SCI patients.
This study demonstrates that HO is a newly formed bone which has a high
rate of turnover as is seen in growing bone. This must be taken into
account for the treatment of the patients.

L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:218304 CAPLUS
DN 122:6561
TI Myeloblastic cell line expresses osteoclastic properties following
coculture with marrow stromal adipocytes
AU Benayahu, D.; Peled, A.; Zipori, D.
CS Department of Cell Biology, Weizmann Institute of Science, Rehovot, 76100,
Israel
SO Journal of Cellular Biochemistry (1994), 56(3), 374-84
CODEN: JCEBD5; ISSN: 0730-2312
PB Wiley-Liss
DT Journal
LA English
AB Osteoclasts are derived from hemopoietic precursors in the marrow. Their
differentiation pathway is still undefined, but an important role was
observed for the marrow microenvironment in the regulation of
osteoclastogenesis. Various marrow stromal cell subtypes were used to
study their possible role in the formation of osteoclasts from myeloblast
(M1) cells. Interactions between M1 cells and the 14F1.1
endothelial-adipocyte stromal cell line were demonstrated in a coculture
model. M1 cells attached to the adherent layer of 14F1.1 cells and formed
distinct foci reminiscent of cobblestone areas. Following these

interactions, M1 cells developed specific enzymic activities and became
multinucleated. Both mononuclear and multinuclear M1 cells became pos. to
tartrate-resistant acid phosphatase (TRaP) and ATPase, a feature
characteristic of osteoclasts, and were also responsive to calcitonin.
Furthermore, they attached to mineralized bone particle
and their membranes changed into a ruffled border at the zone of
interaction with the bone matrix. The authors thus demonstrated that
marrow endothelial-adipocytes may play a role in regulating the
differentiation of myeloblasts into osteoclasts.

L5 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:257790 CAPLUS
DN 116:257790
TI Intensification of maceration in the manufacture of gelatin
AU Losev, Yu. I.; Morochenets, E. P.; Fenina, M. Yu.; Bessarabov, A. M.
CS USSR
SO Khimicheskaya Promyshlennost (Moscow, Russian Federation) (1992), (1),
47-8
CODEN: KPRMAW; ISSN: 0023-110X
DT Journal
LA Russian
AB A math. model of the maceration process in a semicontinuous scheme for
gelatin manufacture was constructed based on the rate of diffusion of HCl to
bone particle surfaces in the reactor. Anal. of the
model showed that the limiting stages of the process were: (1) the
internal diffusion of HCl and (2) the chemical reaction occurring on the
bone particle surface. Model calcns. suggested that the
time required for the maceration process could be shortened theor. from
7-9 days to .apprx.51 h.

L5 ANSWER 18 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 5
AN 1991:253209 BIOSIS
DN PREV199191133764; BA91:133764
TI BONE PARTICLES FROM GALLIUM-TREATED RATS ARE RESISTANT TO RESORPTION
IN-VIVO.
AU DONNELLY R [Reprint author]; BOCKMAN R S; DOTY S B; BOSKEY A L
CS HOSPITAL SPECIAL SURGERY, 535 EAST 70TH STREET, NEW YORK, NY 10021, USA

SO Bone and Mineral, (1991) Vol. 12, No. 3, pp. 167-180.
CODEN: BOMIET. ISSN: 0169-6009.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 25 May 1991
Last Updated on STN: 25 May 1991
AB Gallium nitrate is a clinically effective agent for the treatment of
cancer related hypercalcemia. The mechanism of action of this agent was
investigated following development of a quantitative in vivo bone
resorption assay modified from the method of Glowacki. In a preliminary
study, the time course of resorption of 50 mg subcutaneous implants of
bone powder in growing rats was followed by chemical analysis of mineral
(ash and Ca) contents, enzymatic and histochemical assay of tartrate
resistant acid phosphatase (TRAP) activity, and image analysis
of changes in particle size using von Kossa stained sections. Day 21 was
chosen as a single time point for the comparison of the extent of
resorption of gallium-containing and control bone particles. Resorption
of bone particles containing 0.39 μg Ga/mg bone was significantly
inhibited relative to control particles. Mineral content (6.7 vs. 3.6
mg), Ca content (1.72 vs. 1.37 mg), and the percentage of the field
covered by bone particles (12 vs. 9%) were greater in the animals which
received gallium-containing bone particles. Similarly, the number of
osteoclast-like cells and the TRAP activity in the gallium-containing
bone particle implants at 21 days were increased
relative to controls. These data indicate that gallium incorporation into
bone matrix confers resistance to resorption.

L5 ANSWER 19 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 6
AN 1991:361165 BIOSIS
DN PREV199192049390; BA92:49390
TI NORMAL BONE PARTICLES ARE PREFERENTIALLY RESORBED IN THE PRESENCE OF
OSTEOCALCIN-DEFICIENT BONE PARTICLES IN-VIVO.
AU DEFRANCO D J [Reprint author]; GLOWACKI J; COX K A; LIAN J B

CS DEP CELL BIOL, UNIV MASS MED CENT, 55 LAKE AVE NORTH, WORCESTER, MASS
01655, USA
SO Calcified Tissue International, (1991) Vol. 49, No. 1, pp. 43-50.
CODEN: CTINDZ. ISSN: 0171-967X.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 13 Aug 1991
Last Updated on STN: 13 Aug 1991
AB In an in vivo model of osteoclastic bone resorption, we previously showed
that osteocalcin-deficient bone particles (BPs), derived from
warfarin-treated rats, were resorbed 50% as well as normal BPs and that
they recruited fewer osteoclastic cells with decreased tartrate-resistant
acid phosphatase (TRAP) activity. In order to determine the
specificity of the resorption response, we evaluated the fate of implanted
mixtures of normal and osteocalcin-deficient BPs. Normal and
warfarin-treated donor rats were prelabeled in vivo with oxytetracycline
to permit identification of BPs from either source. Normal,
osteocalcin-deficient, and 50:50 mixtures of BPs (either labeled or
unlabeled) were implanted into normal rats and recovered 12 days later for
enzymatic (TRAP) and nondecalcified histomorphometric analyses. The
incorporated oxytetracycline had no significant effect on resorption of
bone particles. The recovered osteocalcin-deficient BPs were surrounded
by fewer osteoclastic cells, were resorbed less, and contained less
extractable TRAP activity than normal BPs. In mixed BP implants with
normal and osteocalcin-deficient BPs, each type of bone
particle elicited the same tissue response as when implanted
separately. Remarkably, the different particles evoked dissimilar
osteoclastic responses and were resorbed to different extents, even when
adjacent within the same implant. These data suggest that osteocalcin may
act as a substrate signal for resorption and that osteocalcin in the
normal BPs does not influence the cellular response to adjacent
osteocalcin-deficient BPs.

L5 ANSWER 20 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
AN 1991:1085 BIOSIS
DN PREV199191001085; BA91:1085
TI COMPARISON OF BONE AND PARATHYROID HORMONE AS STIMULATORS OF OSTEOCLAST
DEVELOPMENT AND ACTIVITY IN CALVARIAL CELL CULTURES FROM NORMAL AND
OSTEOPETROTIC MI-MI MICE.
AU GRAVES L III [Reprint author]; JILKA R L
CS ENDOCRINOL METABOLISM 111E , VA MED CENT, 1481 W 10TH ST, INDIANAPOLIS,
INDIANA 46202, USA
SO Journal of Cellular Physiology, (1990) Vol. 145, No. 1, pp. 102-109.
CODEN: JCLLAX. ISSN: 0021-9541.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 8 Dec 1990
Last Updated on STN: 9 Dec 1990
AB Osteoclast development was studied in cell cultures prepared from calvaria
of neonatal osteopetrotic (mi/mi) mice or their normal littermates, using
tartrate-resistant acid phosphatase (TRAPase), as an osteoclast
marker. In cultures from normal mice, treatment with 10 nM PTH for 4-5
days stimulated the formation of osteoclasts. However in cultures from
mi/mi mice, this response was only 7% ± 5% that of normal mice and they
were significantly smaller than osteoclasts of normal mice. Mineralized
bone particles elicited osteoclast development in cultures from both
normal and mi/mi mice, and osteoclast size was identical for both
genotypes. Seventy-eight to 96% of the TRAPase-positive cells bound
125I-CT, as demonstrated by autoradiography. 125I-CT binding
characteristics were identical in cultures from both genotypes treated
with bone particles, exhibiting a Kd of 3.3-3.6 + 10-10 M. Addition
of PTH stimulated 45Ca release from the added bone particles only in the
case of cultures prepared from normal mice, and CT inhibited this
response. Cells from normal mice were capable of excavating bone from the
surface of smooth cortical bone wafers, but such excavations were rarely

seen in the case of calvarial cells from mi/mi mice. Thus, PTH-driven
differentiation of osteoclasts is arrested in calvarial cell cultures from
mi/mi mice, but mi/mi preosteoclasts retain the ability to express certain
osteoclast markers in response to bone derived signals. We hypothesize
that the lack of activity of mi/mi osteoclasts is due to the failure of
mi/mi preosteoclasts to respond appropriately to resorptive agents, or to
cytokines elicited by these agents.

L5 ANSWER 21 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN DUPLICATE 7
AN 1988:1113 BIOSIS
DN PREV198885001113; BA85:1113
TI IMPAIRED RECRUITMENT AND DIFFERENTIATION OF OSTEOCLAST PROGENITORS BY
OSTEOCALCIN-DEPLETE BONE IMPLANTS.
AU GLOWACKI J [Reprint author]; LIAN J B
CS SURG RES CHILDREN'S HOSP, 300 LONGWOOD AVE, BOSTON, MASS 02115, USA
SO Cell Differentiation, (1987) Vol. 21, No. 4, pp. 247-254.
CODEN: CLDFAT. ISSN: 0045-6039.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 5 Dec 1987
Last Updated on STN: 5 Dec 1987
AB This is a report of an experimental system to study differentiation of
bone-resorbing osteoclasts and demonstrates that osteocalcin, an
extracellular bone-specific component, is necessary for the recruitment of
osteoclast progenitor cells. The subcutaneous implantation of devitalized
bone particles (BPs) elicits the recruitment and differentiation of
osteoclasts that resorb the BPs. In a previous study, we showed by
histomorphometric analysis that BPs that were deficient in osteocalcin
were resorbed only 60% as well as normal BPs. In this study, the
mechanism of this difference was investigated by measurements of
recruitment, differentiation and activity of bone resorbing cells by
normal and osteocalcin-deficient BP. Mononuclear cells were attracted to
control BPs soon after implantation. In dramatic contrast, cellularity

was depressed around osteocalcin-deficient BPs with very few mononuclear cells within the implant on day 5 (35% of control cellularity). In implants of normal BPs, tartrate-resistant acid phosphatase-positive multinucleated cells were evident by day 5; very few appeared in implants of osteocalcin-deplete BPs even by day 12. The amount of tartrate-resistant acid phosphatase activity in homogenates of the osteocalcin-deficient bone particle specimens not only lagged behind controls but never reached the maximum activity of control BP specimens. These data support the hypothesis that osteocalcin may function as a matrix signal in the recruitment and/or activation of cells for bone resorption.

L5 ANSWER 22 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 8
AN 1986:316930 BIOSIS
DN PREV198682041235; BA82:41235
TI BONE REMODELING DURING THE DEVELOPMENT OF OSTEOPOROSIS IN PARAPLEGIA.
AU CHANTRAINE A [Reprint author]; NUSGENS B; LAPIERE C M
CS HOPITAL CANTONAL UNIV, 1211 GENEVE 4, SWITZERLAND
SO Calcified Tissue International, (1986) Vol. 38, No. 6, pp. 323-327.
CODEN: CTINDZ. ISSN: 0171-967X.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 8 Aug 1986
Last Updated on STN: 8 Aug 1986
AB Osteoporosis developing during the first weeks after the onset of traumatic paraplegia was studied with cortical and cancellous samples of iliac crest and tibia of 14 patients, and compared to normals. We used a procedure of bone particle fractionation (according to degree of mineralization) that allowed us to establish a profile reflecting the metabolic remodeling of bone and to analyze the organic matrix of the newly synthesized tissue. In paraplegics, we observed a large increase in the proportion of little calcified bone in the cortical as well as in the cancellous bone. Based on amino acid analyses, we found a decreased number of hydroxyproline residues in the

newly synthesized organic matrix from paraplegia bone resulting either
from an alteration of the prolyl hydroxylation or from the presence of an
excess of noncollagen polypeptides. These results, together with
previously published data reporting increased urinary hydroxylproline and
calcium kinetic parameters, suggest an enhanced rate of skeletal
remodeling in acute paraplegia. When investigated 2 years after injury,
the patterns of distribution approach that of normal subjects.

L5 ANSWER 23 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
AN 1985:314755 BIOSIS
DN PREV198579094751; BA79:94751
TI SOME MICROBIOLOGICAL ASPECTS OF INEDIBLE RENDERING PROCESSES.
AU HANSEN P-I E [Reprint author]; OLGAARD K
CS DANISH MEAT RESEARCH INST, MAGLEGAARDSVEJ 2, DK-4000 ROSKILDE, DENMARK
SO Zentralblatt fuer Bakteriologie Mikrobiologie und Hygiene Abt 1 Originale
B Hygiene Umwelthygiene Krankenhaushygiene Arbeitshygiene Praeventive
Medizin, (1984) Vol. 180, No. 1, pp. 3-20.
CODEN: ZAOMDC. ISSN: 0174-3015.
DT Article
FS BA
LA ENGLISH
AB Thermal death (TD)-graphs for spores of Bacillus cereus and Clostridium
perfrgens and heat transmission equations for animal tissues were
determined. By using the heat transmission data for bones and the TD
graphs for the spores it was possible to predict the decimal reductions of
spores in the center of the largest pieces present during a given
rendering process, thus establishing conditions for a bacteriologically
safe process. The calculations show that predrying for 45 min, followed
by cooking at 125° C for 15 min and final drying ensures
destruction of non-sporeforming bacteria and B. anthracis spores even in
the center of 70 mm bone particles; heat-resistant spores of clostridia
are virtually unaffected. By reducing the particle size to < 40 mm, the
same process will result in a reasonable reduction of heat resistant
clostridia spores. To verify such theoretically calculated effects, a new

technique has developed in which steel tubes containing a paste inoculated with spores were inserted in bones. These were treated in a cooker, caught during discharge and examined. The results confirmed the calculations. Most modern rendering systems (Carver-Greenfield, Stork-Duke, Wet Pressing) are continuous without pressure cooking and a common feature is a fine minicing which minimizes the problem of heat penetration. To obtain information regarding the thermal sterilizing effect in such systems, investigations were made in a pilot cooker using inoculated meat-and-bone meal mixed with water and/or fat. Regardless of whether fat was added, sterility was found for samples containing water when the temperature during drying reached 110-120° C; cooking in fat only drastically increased the heat resistance of spores of both strains. Sterility was obtained only at temperatures of the order of 140° C, a fact of minor importance for rendering, where thermal treatment usually takes place with moisture present. The decimal reductions actually found were compared to calculated ones and the former were all substantially higher than the latter. Thorough investigation of sterilization in the wet pressing system confirmed that inactivation of pathogenic microorganisms during drying is obtained when temperatures reach 110° C. Calculations showed that pressure cooking at 120° C for 15 min will eliminate pathogenic microorganisms in raw materials for meat and bone pulp (liquid feed). When 1.5% formic acid is added to the finished product, a few hours of storage at 90° C will result in a sterile product.

L5 ANSWER 24 OF 25 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

AN 1983028766 EMBASE

TI Differential action of the bisphosphonates (3-amino-1-hydroxypropylidene)-1,1-bisphosphonate (APD) and disodium dichloromethylidene bisphosphonate (Cl(2)MDP) on rat macrophage-mediated bone resorption in vitro.

AU Reitsma P.H.; Teitelbaum S.L.; Bijvoet O.L.M.; Kahn A.J.

CS Dep. Clin. Endocrinol., Univ. Hosp., Leiden, Netherlands

SO Journal of Clinical Investigation, (1982) Vol. 70, No. 5, pp. 927-933.

ISSN: 0021-9738 CODEN: JCINAO
CY United States
DT Journal; Article
FS 026 Immunology, Serology and Transplantation
033 Orthopedic Surgery
037 Drug Literature Index
LA English
ED Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991
AB The bisphosphonates
(3-amino-1-hydroxypropylidene)-1,1-bisphosphonate
(APD) and disodium dichloromethylidene bisphosphonate (Cl(2)MDP)
effectively inhibit the accelerated bone resorption associated
with some
skeletal disorders, e.g., Paget's disease. However, it has not
been
established whether these compounds exert their inhibitory
effect by
rendering the bone mineral more resistant to degradation, by
diminishing
the activity of resorbing cells, or through some combination of
both
activities. In this study, we have tested these possibilities
using an in
vitro resorption assay system consisting of elicited rat
peritoneal
macrophages co-cultured with particles of (45)Ca-labeled,
devitalized rat
bone. This assay system permits the quantitative assessment of
the action
of APD and Cl(2)MDP on the two major phases of bone resorption
(cell-substrate attachment and osteolysis) under circumstances
where the
drugs are present continuously or, most importantly for the
issues in
question, after the separate pretreatment of the particles or the
resorbing cells. Our data indicate that (a) Both APD and
Cl(2)MDP at
concentrations ≥5 x 10(-6) M diminish macrophage-mediated (45)Ca
release (i.e., bone resorption) in a log dose-dependent fashion.
(b) A
10-min pretreatment of bone particles with either bisphosphonate
(P-C-P)
similarly inhibits resorptive activity, but is most pronounced
with
Cl(2)MDP. However, only APD is effective in reducing resorption
when
cells are preincubated (for 24 h) with P-C-P. (c) In cultures
containing
both labeled and unlabeled bone, significant inhibition occurs
only when
the labeled particles are coated with P-C-P (indicating that the
action of

P-C-P-treated bone is highly localized). (d) P-C-P does not diminish cell-
bone particle attachment, an essential step in the
resorptive process. On the other hand, delaying the addition of P-C-P
until after cell-bone attachment is completed significantly reduces the
resorption-inhibiting effect of these compounds. (e) Cl(2)MDP reduces
culture DNA content in proportion to its inhibitory effect on resorption,
and both the inhibitory and cytotoxic actions of this P-C-P are dependent
upon the presence of bone. On the other hand, APD is cytotoxic only at
very high concentrations (10(-4) M), acta independently of the presence of
bone, and inhibits resorption without killing cells. We conclude that the
mechanisms of action of APD and Cl(2)MDP are markedly different. Cl(2)MDP
is a potent cytotoxin in the presence of bone and apparently exerts its
inhibitory effect in this manner. APD is noncytotoxic at levels adequate
to suppress resorption and, therefore, must inhibit macrophage activity by
some other mechanism. Neither P-C-P appears to limit resorption by
decreasing the solubility of mineralized bone matrix.

L5 ANSWER 25 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
AN 1978:114686 BIOSIS
DN PREV197865001686; BA65:1686
TI CHARACTERIZATION OF BONE PARTICLES FROM MECHANICALLY DE BONED MEAT.
AU FIELD R A [Reprint author]; OLSON-WOMACK S L; KRUGGEL W G
CS DIV ANIM SCI BIOCHEM, UNIV WYO, LARAMIE, WYO 82071, USA
SO Journal of Food Science, (1977) Vol. 42, No. 5, pp. 1406-1407.
CODEN: JFDSAZ. ISSN: 0022-1147.
DT Article
FS BA
LA ENGLISH
AB Bone particles from 5 lots of mechanically deboned meat (MDM) from beef
neck bones were characterized with regard to size and stability. The
largest bone particle diameters were close to the
theoretical limit of 460μ but average bone particle
diameters ranged from 76.6μ (SD = 37.4)-111.7μ (SD = 49.1). Bone

particles were stable in MDM but were readily solubilized in 0.018-0.15M
HCl.

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NEWS 6	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 7	FEB 06	Patent sequence location (PSL) data added to USGENE
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NEWS 13	FEB 23	MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS 14	FEB 23	TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 MeSH terms
NEWS 15	FEB 23	Three million new patent records blast AEROSPACE into STN patent clusters
NEWS 16	FEB 25	USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS 17	MAR 06	INPADOCDB and INPAFAMDB enhanced with new display formats
NEWS 18	MAR 11	EPFULL backfile enhanced with additional full-text applications and grants
NEWS 19	MAR 11	ESBIOBASE reloaded and enhanced
NEWS 20	MAR 20	CAS databases on STN enhanced with new super role for nanomaterial substances
NEWS 21	MAR 23	CA/CAplus enhanced with more than 250,000 patent equivalents from China
NEWS 22	MAR 30	IMSPATENTS reloaded and enhanced
NEWS 23	APR 03	CAS coverage of exemplified prophetic substances enhanced
NEWS 24	APR 07	STN is raising the limits on saved answers

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=> s bone particle
L1          111 BONE PARTICLE

=> s immobili? (3a) (medium or media)
L2         1693 IMMOBILI? (3A) (MEDIUM OR MEDIA)

=> s l1 and l2
L3            1 L1 AND L2

=> d bib abs

L3   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2009 ACS on STN
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AN 2003:796407 CAPLUS
DN 139:312490
TI Method of making bone particles using immobilization media
IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.; Daugherty, Mark P.
PA Osteotech, Inc., USA
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003082159	A1	20031009	WO 2003-US9878	20030331
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2480636	A1	20031009	CA 2003-2480636	20030331
AU 2003228417	A1	20031013	AU 2003-228417	20030331
EP 1494624	A1	20050112	EP 2003-726166	20030331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 20060024656	A1	20060202	US 2005-509585	20050725
PRAI US 2002-368645P	P	20020329		
WO 2003-US9878	W	20030331		

AB The present invention relates to a method for making bone particles from
bone of a variety of sizes and a workpiece forming and holding device for
use with the method. The workpiece forming device includes a base and a
base frame attached to the surface of the base. An apparatus for forming a
solidified mass of bone and immobilization medium is
also provided which includes the workpiece forming device and a detachable
former member enclosing the base frame. Bone is immersed in an
immobilization medium within such workpiece forming
device, which is solidified to form a solidified mass of bone and
immobilization medium and then subdivided to provide
particles of bone in association with immobilization medium
. The immobilization medium may be optionally removed
to leave bone particles suitable for use in orthopedic applications
including implants.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:54:32 ON 24 APR 2009)

FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 15:54:40 ON 24 APR 2009
L1 111 S BONE PARTICLE
L2 1693 S IMMOBILI? (3A) (MEDIUM OR MEDIA)
L3 1 S L1 AND L2

=> s l2 and bone
L4 15 L2 AND BONE

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 11 DUP REM L4 (4 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L5 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:889218 CAPLUS
DN 149:170772
TI Immobilized glycan-binding proteins and methods for culture of stem cells
IN Laine, Jarmo; Satomaa, Tero; Natunen, Jari; Heiskanen, Annamari;
Blomqvist, Maria; Olonen, Anne; Saarinen, Juhani; Tiitinen, Sari; Impola,
Ulla; Mikkola, Milla; Valmu, Leena; Tiittanen, Minna

PA Suomen Punainen Risti, Veripalvelu, Finland; Glykos Finland Ltd
SO PCT Int. Appl., 332pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2008087257	A1	20080724	WO 2008-FI50016	20080118

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI FI 2007-5033 A 20070118
FI 2007-5034 A 20070118
OS MARPAT 149:170772
AB The present invention provides methods and materials to modulate and grow stem cells by contacting stem cells with a immobilized protein binding to terminal glycan structures of stem cells. The modulation can be morphol. change, change in differentiation status, biol. status, or adherence. Methods are also disclosed to screen for such binders.
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:640388 CAPLUS
DN 148:599381

TI Apparatus for processing a sample in a liquid droplet and method of using
the same
IN Kim, Nam Yong; Ying, Y. Jackie; Li, Li; Hu, Min; Lee, Yong Yeow; Kuang,
Jinghao; Leck, Kwong Joo
PA Agency for Science, Technology and Research, Singapore
SO PCT Int. Appl., 148pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2008063136	A1	20080529	WO 2007-SG393	20071114
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
WO 2008063135	A1	20080529	WO 2006-SG363	20061124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,				

RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

PRAI WO 2006-SG363 A 20061124

AB The invention provides an apparatus and a method of processing a biol. and/or chemical sample in a liquid droplet. The apparatus comprises a processing compartment, which is defined by a reservoir and an immobilization member.

The processing compartment is further adapted to accommodate a medium, which is immiscible with the liquid droplet, and of a lower surface energy than the liquid of the liquid droplet. The reservoir is defined by a circumferential wall and a base. The immobilization member is arranged within the reservoir and comprises a surface that is patterned in such a way that it comprises at least one predefined immobilization area. The predefined immobilization area within the patterned surface is of a higher surface energy than the medium. Also the at least one predefined area is of a higher surface energy than the remaining surface and of a sufficient width in the plane of the surface to allow, in said hydrophobic medium, the immobilization of the liquid droplet on the hydrophilic area via hydrophilic-hydrophilic or hydrophobic-hydrophobic interactions. The remaining surface is of at most about the same surface energy as the medium. In the method of the invention the medium is disposed into the apparatus, such that the predefined immobilization area is entirely covered by the medium. The liquid droplet is disposed onto the predefined immobilization area, whereby the liquid droplet is immobilized thereon via hydrophilic-hydrophilic or hydrophobic-hydrophobic

interactions. A process is performed on the biol. and/or chemical sample in
said liquid droplet.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 1
AN 2008:584954 BIOSIS
DN PREV200800584953
TI Expression of the extracellular domain of OB-cadherin as an Fc fusion
protein using bicistronic retroviral expression vector.
AU Lira, Cristina B. B. [Reprint Author]; Chu, Khoi; Lee, Yu-Chen; Hu, Mickey
C-T.; Lin, Sue-Hwa
CS Univ Texas MD Anderson Canc Ctr, Dept Mol Pathol, Unit 89, 1515 Holcombe
Blvd, Houston, TX 77030 USA
liracbb@gmail.com
SO Protein Expression and Purification, (OCT 2008) Vol. 61, No. 2, pp.
220-226.
CODEN: PEXPEJ. ISSN: 1046-5928.
DT Article
LA English
ED Entered STN: 22 Oct 2008
Last Updated on STN: 22 Oct 2008
AB Osteoblast cadherin (OB-cadherin, also known as cadherin-11) is a
Ca2+-dependent homophilic cell adhesion molecule that is expressed mainly
in osteoblasts. OB-cadherin is expressed in prostate cancer and may be
involved in the homing of metastatic prostate cancer cells to bone
. The extracellular domain of OB-cadherin may be used to inhibit the
adhesion between prostate cancer cells and osteoblasts. In this report,
we describe the expression of the extracellular domain of OB-cadherin as
an Fc fusion protein (OB-CAD-Fc) in human embryonic kidney 293FT cells
using a bicistronic retroviral vector. Coexpression of GFP and OB-CAD-Fc
through the bicistronic vector permitted enrichment of
OB-CAD-Fc-expressing cells by fluorescence-activated cell sorting.
Recombinant OB-CAD-Fc proteins were secreted into cell medium, and about
0.85 mg of purified OB-CAD-Fc protein was purified from I I of the

conditioned medium using immobilized protein
A-affinity chromatography. The purified CB-CAD-Fc was biologically active
because it supported the adhesion of PC3 cells and L cells transduced with
OB-cadherin. The availability of OBCAD-Fc offers opportunities to test
whether OB-CAD-Fc can be used to inhibit OB-cadherin-mediated prostate
cancer bone metastasis in vivo or to generate antibodies for
inhibiting the adhesion between prostate cancer cells and osteoblasts. (c)

L5 ANSWER 4 OF 11 CAPLUS
AN 2007:259904 CAPLUS
DN 146:291157
TI Immobilized Notch ligand-based system for differentiation of hematopoietic
progenitor cells into T cells
IN Roy, Krishnendu; Taqvi, Sabia
PA Board of Regents, The University of Texas System, USA
SO PCT Int. Appl., 33pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007027226	A2	20070308	WO 2006-US16228	20060428
WO 2007027226	A3	20070426		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI US 2005-675803P P 20050428
AB The present invention generally relates to methods for the ex vivo
expansion of undifferentiated cells. More specifically, the present
invention relates to systems and methods of differentiating
undifferentiated cells into a desired lineage by providing to an
undifferentiated cell stromal cell conditioned medium and a
differentiation inducing ligand. In particular, Notch ligand DLL4 was
conjugated to biotinylated magnetic microbeads. It was shown that
microbeads functionalized with the Notch ligand DLL4 in combination with
stromal cell paracrine factors can be used as artificial stromal cells to
trigger Notch signaling in myoblasts and commit bone marrow
hematopoietic stem cells (BMHSCs) to the T cell lineage in both co-culture
and insert culture systems in a quant. manner. In conclusion, the authors
have invented a synthetic biomaterial-based system that can effectively
trigger Notch signaling during lymphocyte development from bone
marrow-derived stem cells. The system of the present invention may be
used to expand any undifferentiated cell that requires cell-derived soluble
factors and cell-contact dependent signals. The present invention does
not rely on transfected stromal cells as the signaling entity for the
creation of differentiated cells.

L5 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:13245 CAPLUS
DN 144:82068
TI M. tuberculosis glutamine synthetase and diagnostic and therapeutic
methods therefor
IN Harcourt, Rebecca Louise; Cole, Robert Alan
PA Proteome Systems Intellectual Property Pty. Ltd., Australia
SO PCT Int. Appl., 158 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2006000045 A1 20060105 WO 2005-AU930 20050624

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI AU 2004-903482 A 20040625

AB The present invention provides immunogenic peptides of M. tuberculosis antigens, antibodies thereto, diagnostic kits and assays for determining infection with M. tuberculosis in patient samples, and responsiveness to therapy. In particular, the invention relates to a putative glutamine synthetase A4 (also designated "glutamine synthetase" or GS) identified by a proteomics approach in the body fluids of a cohort of diseased patients, including sputum, pleural fluid, plasma and serum. Sequence anal. indicates that the sequence of the M. tuberculosis protein GS comprised a region that appears to be a glutamine synthetase catalytic domain in addition to a region that appears to be a GS P-Grasp domain. The inventors further provides a PEPSET comprising 90 synthetic overlapping peptides for mapping B-cell epitopes and subsequent preparation of monoclonal and polyclonal antibody. Furthermore, TB-neg. sera, and sera from TB-pos. subjects,

including both HIV-/TB+ and HIV+/TB+ subjects, are screened for the presence of antibodies to each peptide in the PEPSET. Peptides that are immunogenic in the TB-pos. cohort are selected and used in the diagnostic assays and formulations described herein. Plasmacytomas were also produced that express antibodies against selected peptides.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 2
AN 2006:500418 BIOSIS
DN PREV200600514895
TI Bone-like tissue formation by three-dimensional culture of MG63 osteosarcoma cells in gelatin hydrogels using calcium-enriched medium.
AU Takagishi, Yoshiyuki; Kawakami, Takashi; Hara, Yusuke; Shinkai, Masashige
[Reprint Author]; Takezawa, Toshiaki; Nagamune, Teruyuki
CS Univ Tokyo, Sch Engn, Dept Chem and Biotechnol, Bunkyo Ku, 7-3-1 Hongo,
Tokyo 1138656, Japan
shinkai@bio.t.u-tokyo.ac.jp
SO Tissue Engineering, (APR 2006) Vol. 12, No. 4, pp. 927-937.
ISSN: 1076-3279.
DT Article
LA English
ED Entered STN: 4 Oct 2006
Last Updated on STN: 4 Oct 2006
AB The aim of this study was to investigate the effect of Ca2+ concentration in culture medium on the promotion of osteogenesis by MG63 osteoblast-like cells and to prepare bone-like tissues by supplying Ca2+-enriched medium to MG63 cells immobilized in three-dimensional gelatin hydrogels. Human osteosarcoma MG63 cells were cultured on tissue culture dish under various Ca2+ concentrations to evaluate the effect of Ca2+ concentration on calcium deposition. When Ca2+ concentration was 8 mM, the maximum calcium deposition was obtained at day 28. Then MG63 cells were entrapped in gelatin hydrogels cross-linked by transglutaminase and cultured for 28 days, either in a standard culture medium or in medium containing 8 mM Ca2+. Effects of

Ca2+-enriched medium on osteoblastic phenotype of MG63 cells in gelatin
hydrogels were analyzed in terms of cell number, calcium deposition
content, and alkaline phosphatase (ALP) activity. The characteristics of
calcified gelatin hydrogels were evaluated by x-ray diffraction (XRD),
histological analysis, and scanning electron microscopy (SEM). After 28
days of culture, no significant difference in cell numbers was found
between the different culture conditions. However, calcium content of
gelatin hydrogels with cells cultured in Ca2+-enriched media was
significantly higher than that of hydrogels with cells cultured in
standard Ca2+ concentration medium. After 14 days of culture, ALP
activity of cells cultured in Ca2+-enriched media was down-regulated
compared with that of cells cultured in standard Ca2+ concentration media.
XRD analysis indicated the formation of hydroxyapatite in gelatin
hydrogels cultured in the Ca2+-enriched media at day 14, and the XRD
pattern of the composite at day 21 was almost similar to that of mouse
tibia. Moreover, histological analysis and SEM analysis revealed that
cross-sections of hydrogels cultured in Ca2+-enriched media had an
organic/mineral layer structure analogous to that of mouse tibia.

L5 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:129324 CAPLUS
DN 140:327018
TI Effect of surface structure on cell growth prepared by the terminal
immobilized method
AU Sakurai, Toshihiko; Mizokami, Hiroshi; Furukawa, Shinichi; Sakata, Masayo;
Kunitake, Masashi; Hirayama, Chyuichi; Ihara, Hirotaka
CS Department of Applied Chemistry and Biochemistry, Faculty of Engineering,
Kumamoto University, Kumamoto, 860-8555, Japan
SO Journal of Applied Polymer Science (2004), 91(5), 3001-3008
CODEN: JAPNAB; ISSN: 0021-8995
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB Substrate effects of surface morphol. and chemical structure for cell

cultures prepared by mol. terminal immobilization method were studied. When
we focused attention on a Ph group as a functional moiety, the cell growth
on the surface prepared by the immobilization method showed a better
proliferation rate than that of a substrate prepared by the casting method.
Further, from the results of mouse fibroblast L929 cell (L-cell) growth on
poly(amino acid)immobilized surfaces in Dulbecco's minimal essential
medium containing 10% FBS, it was indicated that the amino group was more
effective than the Ph group, and that a slight difference of chemical
structure had a substantial influence on cell growth. In addition, mouse
bone marrow-derived Sp2/0-Ag14 cell (Sp2/0 cell) culture in ASF-104 serum-free medium, poly(amino acid)-immobilized substrates showed an almost equal proliferation rate to that in a serum-containing medium. These results showed that effective cell growth can
occur on immobilized surfaces, and that detection of a weak interaction
depends on the functional groups.
RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:796407 CAPLUS
DN 139:312490
TI Method of making bone particles using immobilization media
IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.; Daugherty, Mark P.
PA Osteotech, Inc., USA
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003082159	A1	20031009	WO 2003-US9878	20030331

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2480636 A1 20031009 CA 2003-2480636 20030331
AU 2003228417 A1 20031013 AU 2003-228417 20030331
EP 1494624 A1 20050112 EP 2003-726166 20030331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
US 20060024656 A1 20060202 US 2005-509585 20050725
PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331
AB The present invention relates to a method for making bone particles from bone of a variety of sizes and a workpiece forming and holding device for use with the method. The workpiece forming device includes a base and a base frame attached to the surface of the base. An apparatus for forming a solidified mass of bone and immobilization medium is also provided which includes the workpiece forming device and a detachable former member enclosing the base frame. Bone is immersed in an immobilization medium within such workpiece forming device, which is solidified to form a solidified mass of bone and immobilization medium and then subdivided to provide particles of bone in association with immobilization medium. The immobilization medium may be optionally removed to leave bone particles suitable for use in orthopedic applications including implants.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1998:479427 CAPLUS

DN 129:90459
OREF 129:18495a,18498a
TI Treatment of mammalian myocardium with morphogen locally, or with morphogen-treated myogenic precursor cells
IN Cohen, Charles M.; Sampath, Kuber T.
PA Creative Biomolecules, Inc., USA
SO PCT Int. Appl., 112 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827995	A1	19980702	WO 1997-US23611	19971219
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2275436	A1	19980702	CA 1997-2275436	19971219
AU 9857119	A	19980717	AU 1998-57119	19971219
AU 741350	B2	20011129		
EP 952845	A1	19991103	EP 1997-953356	19971219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001507354	T	20010605	JP 1998-528998	19971219
PRAI US 1996-33145P	P	19961220		
WO 1997-US23611	W	19971219		

AB The present invention provides methods for the treatment, and pharmaceuticals for use in the treatment, of mammalian subjects at risk of, or afflicted with, loss of or damage to myocardial tissue. The methods involve the administration of certain morphogens, inducers of those morphogens, agonists of the corresponding morphogen receptors, or small mol. morphogenic activators, or implantation of cells induced with those agents. The morphogens useful in the invention include OP1, CBMP-2A (BMP-2), CBMP-2B (BMP-4), and other members of the morphogens family of the TGFβ superfamily of growth and differentiation factors. Soluble human OP-1 was purified from CHO cell conditioned media by

immobilized metal ion affinity chromatog., ion-exchange chromatog.
and gel filtration. The mol. mass of the purified OP-1 was 110 kDa, which
corresponds to a mature OP1 dimer (35-36 kDa) and two pro-domains (39 kDa
each).
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1998:583186 CAPLUS
DN 129:301732
OREF 129:61545a,61548a
TI Carbon-Mineral carriers used for adsorption immobilization of non-growing
cells
AU Kovalenko, G. A.; Kuznetsov, E. V.; Lenskaya, V. M.
CS Inst. Kataliza, SO RAN, Novosibirsk, 630090, Russia
SO Biotekhnologiya (1998), (1), 47-56
CODEN: BTKNEZ; ISSN: 0234-2758
PB Biotekhnologicheskaya Akademiya RF
DT Journal
LA Russian
AB A comparative investigation on the adsorption immobilization of
non-growing bacteria cells (methanotrophs, rhodococci, Bacillus and E.
coli) on inorg. carriers has been carried out. The carriers used included
alumina, silicagel, as well as carbon-mineral carriers with the different
surface carbon contents (from 0.3 to 20% w) and carbon materials. The
adsorption characteristics of the carriers with respect to the listed
microorganisms was the subject of a careful study. It was shown that the
biocatalyst activity of the immobilized methanotrophs
(methanemonooxydenase (MMO) activity, stability) were the function of the
way the immobilization had been performed. The optimum condition to
obtain an active heterogeneous biocatalyst based on non-growing
immobilized cells was the cultivation of Methylosinus trichosporium in
fresh culture media prior immobilization. This made
it possible to save 50% of the MMO activity of the cell suspension and
prolong the operation stability of the preparation up to 12-16 h.

L5 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN DUPLICATE 3
AN 1981:232350 BIOSIS
DN PREV198172017334; BA72:17334
TI AN IN-VITRO ASSAY FOR T LYMPHOCYTE PROGENITORS CFU-PRET.
AU ACUFF B R [Reprint author]; COHEN J J
CS DEP MICROBIOL IMMUNOL, UNIV COLO MED SCH, DENVER, COLO 80262, USA
SO Journal of Supramolecular Structure, (1980) Vol. 14, No. 2, pp. 215-222.
CODEN: JSPMAW. ISSN: 0091-7419.
DT Article
FS BA
LA ENGLISH
AB Thy-1.2 negative progenitors give rise to Thy-1.2 positive colony cells
when mouse bone marrow is cultured in vitro. The bone marrow cells are immobilized in a viscous medium containing methyl cellulose; discrete colonies are identifiable at 2 days
and contain 30-60 cells by day 3 of culture. Colonies are tightly packed
spheres (raspberries) and grow suspended in the gel. Growth of the
raspberry colonies is absolutely dependent upon the presence of the
appropriate serum (horse or human; not fetal calf) and conditioned medium
from pokeweed mitogen-stimulated mouse spleen cells. As little as 0.1% of
the conditioned medium is sufficient to promote raspberry colony growth.
Under these conditions, nude mouse bone marrow yields as many colonies (1/1000 nucleated cells plated) as normal marrow. Thymus, lymph
node and spleen (normal or nude) do not form colonies. Colony precursors
are predominantly in S phase of the cell cycle, as determined by 3H-thymidine suicide of fresh bone marrow. Their numbers fall with age. Because the cells in colonies are Thy-1 positive, peanut
agglutinin-positive and active in a pre-T cell synergy assay, their
precursors apparently are early committed T cell progenitors; they were
designated CFU-preT.

=> s bone
L6 1206717 BONE

=> s l6 and water
L7 23765 L6 AND WATER

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=> s l7 and divid?
L8          914 L7 AND DIVID?

=> s l8 and separat?
L9           39 L8 AND SEPARAT?

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10          33 DUP REM L9 (6 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 33 ANSWERS - CONTINUE? Y/(N):y

L10  ANSWER 1 OF 33  EMBASE  COPYRIGHT (c) 2009 Elsevier B.V. All
rights
     reserved on STN
AN   2008210869  EMBASE
TI   The analysis of bone mass and microarchitecture in
     ovariectomized rat by dual energy X-ray absorptiometry and micro
CT.
AU   Fan, Hui-Jie; Dai, Ru-Chun (correspondence); Sheng, Zhi-Feng;
Fang,
     Ling-Na; Wu, Xian-Ping; Liao, Er-Yuan
CS   Institute of Metabolism and Endocrinology, Second Xiang-Ya
Hospital,
     Central South University, Changsha 410011, China.
dairuchun@yahoo.com.cn
AU   Fan, Hui-Jie
CS   Division of Endocrine in Fifth People' s Hospital of Zhengzhou,
Zhengzhou
     450000, China.
SO   Chinese Journal of Radiology, (Apr 2008) Vol. 42, No. 4, pp.
419-425.
     Refs: 17
     ISSN: 1005-1201
CY   China
DT   Journal; Article
FS   014     Radiology
     027     Biophysics, Bioengineering and Medical Instrumentation
     033     Orthopedic Surgery
LA   Chinese
SL   Chinese; English
ED   Entered STN: 15 May 2008
     Last Updated on STN: 15 May 2008
AB   Objective: To observe and compare the changes of bone mass and
     microarchitecture in ovariectomized rat left tibia by dual
energy X-ray
     absorptiometry (DXA) and microCT (μCT).  Methods: Forty
seven-month-old
     SD rats were randomly divided into ovariectomized (OVX) and
     sham-operated (SHAM) groups, twenty in each group.  After killed
at 3
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weeks and 15 weeks post-surgery, DXA scanning were performed in the left tibia in vitro. The images of left tibia were divided into seven, isometric regions of interest (ROI1-7). When analysis finished, bone density (BD) of each ROI and the total bone were determined. The samples were fixed by 4% paraformaldehyde and then placed in the specimen holder filled with deionized water. The sensitive regions for bone mass changes were selected for scanning by Fluro. After scanning, the regions involving 0. 4mm slice thickness and 2.5mm distance far end from tibial growth plate were selected as the ROI of cortical bone analysis. The regions selected as ROI of cancellous analysis, were involved in 1.2mm slice thickness and 0.7mm distance at the far end from tibial growth plate.

After three dimension reconstruction, 2D images of the maximum intensity projection and pictures of 3D microarchitecture were obtained, and BD and microarchitectural parameters were quantitatively identified. All data was statistically processed with SPSS for Windows. Results: At the 3rd week, BD of ROI1 in rat left tibia in OVX (0.2346 ± 0.0280) g/cm(2) was much lower than that (0.2660 ± 0.01990) g/cm(2) in SHAM (P <0.05).

While at the 15th week, BD of ROI1 (0.2527 ± 0.0161) and R0I2 (0.1862 ± 0.0052) g/cm(2) in OVX were both lower than SHAM (0.2793 ± 0.0229) and (0.1986 ± 0.0102) g/cm(2) respectively, P <0.01 for both). Compared with SHAM rat [cortical area (Ct-Ar) = (0.3138 ± 0.0621) mm(2), marrow area (Ma-Ar) = 8.44 ± 1.25) mm(2), total area (T-Ar) = 8.75 ± 1.26) mm(2), moment of inertia (Mm) = (3.485 ± 0.373) mm(4)], there were significant increases in Ct-Ar (0.4306 ± 0.1308) mm(2), Ma-Ar (10.31 ± 1.98) mm(2), T-Ar (10.74 ± 2.05) mm(2), and Mm (4.101 ± 0.726) mm(4) in OVX mice at the 3rd week (P <0.05 for all). While at the 15th week, only cortical thickness (Ct-Th) (0.0235 ± 0.0024) mm showed a decrease in OVX group (P <0.05). In OVX group, Ct-Th (0.0235 ± 0.0024) mm and Ct-Ar (0.2528 ± 0.0367) mm at 15 weeks were lower

than that [Ct-Th = (0.0377 ± 0.0098)mm, Ct-Ar = (0.4306 ± 0.1308) mm(2) at 3 weeks (P <0.01 for both)]. In SHAM group, inner perimeter (In-Pm) (13.38 ± 0.54) mm, outer perimeter (Ot-Pm) (13.59 ± 0.56) mm and Mm (4.096 ± 0.364) mm(4) at 15 weeks were higher than that [In-Pm = 12.41 ± 0.74) mm, Ot-Pm = 12.63 ± 0.75) mm, Mm = (3.485 ± 0.373) mm(4) at 3 weeks (P <0.01 for all)]. OVX rats had much lower volume BD(vBD) (288.2 ± 48.2) mg/mm(3), tissue BD(tBD) (604.5 ± 45.3) mg/mm(3), bone volume fraction (BVF) (25.1 ± 5.1)%, and trabecular mumeer(Tb-N) (6.04 ± 2.94) mm(-1) (P <0.01 for all), but higher structure model index (SMI) 3.09 ± 0.27 and trabecular separation (Tb-Sp) (0.186 ± 0.129) mm than SHAM 2. 63 ± 0.21 and (0.078 ± 0.038) mm respectively at the 3rd week (P <0.01 and P <0.05 respectively). At the 15th week, vBD (271.2 ± 50.9) mg/mm(3), BVF (21.6 ± 5.2)% and Tb-N (3.21 ± 1.92) mm(-1) in OVX were still lower than SHAM [vBD = (389.8 ± 77.0) mg/mm(3), BVF = (30.9 ± 6.0)%, Tb-N = (7.44 ± 3.53) mm(-1) respectively (P <0.01 for all)], SMI 3.11 ± 0.36 and Tb-Sp (0.370 ± 0.215) mm in OVX were also higher than SHAM 2.58 ± 0.36 and (0.141 ± 0.104) mm (P <0.01 for both), but no significant difference of tBD could be found. In OVX group, the scores of tBD (691.0 ± 36.7) mg/mm, Tb-Th (0.040 ± 0.009) mm, Tb-N (3.21 ± 1.92) mm(-1), Tb-Sp (0.370 ± 0.215) mm in the 15th week were higher than that [tBD = (604.5 ± 45.3) mg/mm, Tb-Th = (0.030 ± 0.002) mm, Tb-N = (6.04 ± 2.94) mm(-1), Tb-Sp = (0.186 ± 0.129) mm respectively] in the 3rd week (P <0.05 for all), while there were no differences between the 3rd and the 15th week in SHAM group. Conclusions: DXA is weak in detecting the tiny changes of BD though it is convenient and non-invasive. μCT is suitable to detect the changes of bone mass and microarchitecture.

L10 ANSWER 2 OF 33 EMBASE
AN 2007542418 EMBASE
TI Effects of different conditions on bone marrow mesenchymal stem cells differentiating into cardiomyocyte-like cells in vitro.
AU Wang, Meng-Hong; Wen, Yuan; Zhang, Z.L.; Huang, J.

CS Department of Cardiology, Nanchang University, Nanchang 330006 Jiangxi
Province, China.
AU Xie, An; Wang, Yang, Dr. (correspondence)
CS Institute of Urinary Surgery, Nanchang University, Nanchang 330006 Jiangxi
Province, China. wang63cn@sina.com
SO Journal of Clinical Rehabilitative Tissue Engineering Research, (21 Oct
2007) Vol. 11, No. 42, pp. 8506-8509.
Refs: 21
ISSN: 1673-8225
CY China
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
LA Chinese
SL English; Chinese
ED Entered STN: 22 Nov 2007
Last Updated on STN: 22 Nov 2007
AB Aim: Cellular therapy of bone marrow mesenchymal stem cells
(BMSCs) for myocardial injury has improved ventricular function, but the
mechanism of benefit is unclear. The purpose of this study was to
investigate the effects of different conditions on inducing BMSCs to
differentiate into cardiomyocyte-like cells in vitro. Methods: The
experiment was conducted in the Institute of Urinary Surgery, First
Affiliated Hospital of Nanchang University from May 2005 to April 2006. 1
Bone marrow was donated by healthy adult with informed consent.
Human fetus aged 16 weeks induced by labor with water bag was
donated by their parents. 2 BMSCs were harvested from bone
marrow of healthy donors with lymphocyte isolation medium and by BMSCs
adherence. Passage-4 BMSCs were used for experiments. Two groups were
divided as biological induction group and chemical induction
group. In the biological induction group, BMSCs were induced in three
different ways: with neonatal cardiomyocytes in direct cell-to-cell
coculture system, BMSCs and cardiomyocytes were cultured in two chambers
separated as indirect coculture system, IBMSCs were cultured in
media that had been conditioned by homogenate of cardiomyocytes. In
chemical induction group, the 4th passage BMSCs underwent induction by
being exposed to different concentrations (5, 10 and 15 μmol) of

5-azacytidine (5-aza) for 12, 24 and 48 hours, respectively. 3
Immunofluorescence staining was performed to detect kytoplasm sarcomeric
α-actin. Results: 1 BMSCs differentiated into cardiomyocyte-like
cells only when they cocultured in direct cell-to-cell way with neonatal
cardiomyocytes, but not in other biological induction modes. 2 In chemical
induction group, kytoplasm sarcomeric α-actin was not found after
immunofluorescence staining. In 5-azacytidine-treated cultures,
cardiomyocyte-like cells derived from BMSCs did not appear. Conclusion: 1
BMSCs could be triggered by neonatal cardiomyocytes to differentiate into
cardiomyocyte-like cells and the mechanical factors were obligatory ones
for cardiomyogenic differentiation. 2 It was not be confirmed in our
experiment whether BMSCs could be induced to differentiate in an expected
cardiomyogenic way by 5-azacytidine-treatment.

AN 2007292298 EMBASE
TI Effects of the long-term intake of low-dose ethanol on the spongy
bone metabolism of growing mice.
AU Chen, Yan; Wu, Tie, Prof. (correspondence); Chen, Wen-Shuang; Ling, J.
CS Department of Bone Biology, Guangdong Medical College, Zhanjiang 524023
Guangdong Province, China. wutie@gdmc.edu.cn; chyang@gdmc.edu.cn
SO Journal of Clinical Rehabilitative Tissue Engineering Research, (8 Apr
2007) Vol. 11, No. 14, pp. 2699-2701.
Refs: 9
ISSN: 1673-8225
CY China
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
033 Orthopedic Surgery
LA Chinese
SL English; Chinese
ED Entered STN: 2 Jul 2007
Last Updated on STN: 2 Jul 2007
AB Aim: To observe the effects of low dose ethanol intake on the spongy
bone metabolism of growing mice. Methods: The experiment was
conducted in the animal center of Guangdong Medical College from October

2004 to March 2005. Thirty six-week-old clean Kunming mice of 25-30 g
were randomly divided into three groups: 1 basal control group: The mice were killed after aesthesia to sample; 2 normal control group:
The animals were infused with 10 mL/kg daily distilled water; 3 ethanol group: 0.5 volume fraction ethanol (selected according to the
preliminary experiment results) wag infused by 4 g/kg daily (equivalent to
a 60 kg adult intake 30 g ethanol daily) for 60 days. All mice were
killed under aesthesia and their proximal tibia was harvested for undecalcified sections and the bone metabolism indexes were measured by automatic image-analysis system for bone histomorphometry. Results: All 30 mice were involved in the result
analysis. 1 Influence of ethanol on the static and dynamic parameters of
the proximal tibia: Compared with the normal control group, the trabecular
area percentage of the ethanol group was decreased obviously [(9.77±3.30)%, (3.31±0.94)%, P < 0.05], bone formation rate was decreased [(27.46±4.55)%, (17.97±6.91)%, P < 0.051; trabecular separation degree was increased [(430.20±177.91), (1115.37±320.45) μm, P < 0.05], and osteoclast of trabecular perimeter inclined to increase. 2 Effect of ethanol on the bone biomechanics parameters: The maximum resistant stress and structure
intensity value of collum femoris of the ethanol group were significantly
lower than the normal control group [maximum resistant stress: (46.93±11.70), (128.93±10.48) MPa; structure intensity: (20.80±2.42), (29.48±2.52) N, P < 0.01]. Conclusion: Low dose ethanol intake could decrease the bone formation rate and result in the trabecular bone loss of growing mice.

L10 ANSWER 4 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 2007:404116 BIOSIS
DN PREV200700399169
TI Effects of the stilbene extracts from Cajanus cajan L. on ovariectomy-induced bone loss in rats.
AU Zheng Yuan-yuan [Reprint Author]; Yang Jing; Chen Di-hua; Sun Lan
CS Chinese Acad Med Sci, Inst Basic Med Sci, Beijing 100005, Peoples R China
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SO Yaoxue Xuebao, (MAY 2007) Vol. 42, No. 5, pp. 562-565.
CODEN: YHHPAL. ISSN: 0513-4870.
DT Article
LA Chinese
ED Entered STN: 25 Jul 2007

Last Updated on STN: 25 Jul 2007
AB The Cajanus cajan L. is a natural plant, which contains lots of potential active components. The effects of the stilbene extracts from Cajanus cajan L. (sECC) on ovariectomy (OVX) induced bone loss in rats were identified. All experimental female rats were divided into 6 groups, i. e., sham-operated rats, OVX rats, 17 beta-estradiol (E-2)-treated rats, sECC-treated rats with three dosages, 50, 100, and 200 mg (.) kg(-1), separately. Two weeks after the operation, different dosage of sECC, E-2 or deionized water were given to the 6 groups of rats, respectively for another 8 weeks through stomach. Then, all rats were killed. The body weight and uterus wet weight were measured. Contents of serum E-2, follicle stimulating hormone (FSH), and luteinizing hormone (LH) were measured by radioimmunoassay. Femoral morphology was observed by HE stain. The results showed that there were no changes of the uterine weight and serum E-2 concentration in sECC-treated rats compared with OVX rats. However, the serum FSH and LH concentrations reduced by 11. 5% and 15. 2% (P < 0. 05), respectively. By HE staining, it is found that the 60% of the femur structure had been significantly improved in OVX rats treated with 200 mg (.) kg(-1) of sECC. The trabeculae were thicker and larger than that of OVX rats. It is clear that sECC improved femoral morphological structure and decreased FSH and LH contents without affecting serum E-2 level and uterine weight in OVX rats. The results suggested that sECC had potential action in treatment of postmenopausal osteoporosis.

L10 ANSWER 5 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 2007132046 EMBASE
TI Treatment of stroke in rats with bone marrow mesenchymal stem cells.
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CS Department of Neurosurgery, Peking Union Medical College Hospital, Chinese Academy of Medical Science, Beijing 100730, China.
AU Zheng, Li-Fen; Fan, Xiao-Tong; Wang, Yu; Ma, Wen-Bin; Li, Gui-Lin; Dou,

Wan-Chen; Zhang, Zhen-Xing; Li, Shi-Fang; Feng, Ming; Han, Qin; Li,
Zhao-Jian; Zhang, Zi-Heng; Kang, Jun; Kong, Yan-Guo; Wang, Ren-Zhi; Zhao,
Chun-Hua
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SO National Medical Journal of China, (16 Jan 2007) Vol. 87, No. 3, pp.
184-189.
Refs: 16
ISSN: 0376-2491
CY China
DT Journal; Article
FS 025 Hematology
029 Clinical and Experimental Biochemistry
008 Neurology and Neurosurgery
LA Chinese
SL Chinese; English
ED Entered STN: 17 Apr 2007
Last Updated on STN: 17 Apr 2007
AB Objective: To investigate the effects of treatment of stroke in rats with
bone marrow mesenchymal stem cells (BMSCs) and mechanism thereof.
Methods: Bone marrow of a healthy volunteer was collected and
the BMSCs were separated with density gradient centrifugation.
The hBMSC were cultivated and harvested until the third passage.
A number
of adult male Sprague-Dawley rats received corresponding behavioral
training before surgery and underwent transient middle cerebral arterial
occlusion (MCAO) for 2 hours. Sixty of them showing the scores of 6-12
according to the modified neurological severity score system were randomly
divided into 2 groups: treatment group (n = 48, injected into the
cortex around the ischemic areas with hBMSCs 3 x 10(5)/15 μl) and
control group (n = 12, injected with D-Hanks solution 15 μl 24 hours
after the establishment of MCAO models. Morris water maze test,
Rotarod test and adhesive-removal test were performed since the 4th day to
the 32 day after transplantation once every 3 days. 1, 2, 3, and 4 weeks
after the transplantation 12 rats from each group were killed randomly to
take out their brains. Immunofluorescence was used to identify the
migration, survival and differentiation of the hBMSC. Results: A large
number of hBMSC could be seen within 2 weeks after transplantation. The

number of hBMSC decreased since the 21st day alter transplantation and few
cells could be found at the end of 1 month after. No definite evidence
supported the differentiation of neural cells derived from the hBMSCs
during the whole process. Morris water maze test showed that
the mean escape time 1 week after transplantation of the treatment group
was (69 ± 10) s, significantly shorter than that of the control group
[(120 ± 0) s, P < 0.05] The significant difference persisted until the
4th week(P > 0.05]. Rotarod test with the speed of 10 r/min showed that
the mean latency period 10 days after transplantation of the treatment
group was (167 ± 18) s, significantly longer than that of the control
group [(37 ± 19) s, P < 0.05]. The significant difference persisted
until the experimental terminal. The adhesive-removal test showed that
the mean latency period 13 days alter transplantation of the treatment
group was (33 ± 8) s, significant shorter than that of the control
group [(84 ± 13) s, P < 0.05]. The significant difference persisted
until the experimental terminal. Conclusion: Injection of hBMSCs into
brain cortex improves neurological functional recovery alter stroke. The
transplanted cells can migrate and survive for a certain period, but no
hBMSC express proteins phenotype of neural cells.

L10 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:197203 CAPLUS
DN 146:294667
TI Method for extracting highly concentrated calcium powder from pickled
anchovies, which comprises extraction, centrifugal separation,
steaming, drying and crushing steps, and highly concentrated calcium
powder obtained thereby
IN Kim, Man Do
PA S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DT Patent
LA Korean

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2006102305	A	20060927	KR 2006-83097	20060830
US 20080057166	A1	20080306	US 2007-652975	20070111

PRAI KR 2006-83097 A 20060830

AB A method for extracting highly concentrated calcium powder from pickled anchovies is provided to obtain natural calcium powder with high reliability, and to reduce the cost by reutilizing the residue of liquid pickled anchovies. The method for extracting highly concentrated calcium powder from pickled anchovies comprises the steps of: extracting fermented and aged pickled anchovies to sep. them into liquid pickled anchovies and the residue; introducing the residue and hot water at 70-80 C into an agitator in a weight ratio of 5:5 and agitating the materials; introducing the mixture into a centrifugal separator to separator a solid material mainly containing anchovy bones and solution containing shells, flesh and oil of anchovies; steaming the solid material at 150-200 C for 15 min to sterilize and disinfect the solid material; drying the steamed solid content to remove water; and crushing the dried solid material into finely divided powder.

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AN 2006580005 EMBASE

TI Prevention of bone loss by aqueous extract of Epimedii sagittatum in an ovariectomized rat model of osteoporosis.

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AU Ma, Ming-Hua

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SO Journal of Chinese Integrative Medicine, (6 Nov 2006) Vol. 4, No. 6, pp.
628-633.
Refs: 15
ISSN: 1672-1977
CY China
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
033 Orthopedic Surgery
037 Drug Literature Index
LA English
SL Chinese; English
ED Entered STN: 11 Dec 2006
Last Updated on STN: 11 Dec 2006
AB Objective: To investigate the prevention effect of aqueous extract of
Epimedii sagittatum (ESE) on ovariectomy-induced (OVX) bone loss in rats. Methods: Rats were divided into sham-operated and OVX groups. The OVX rats were divided into four groups treated with distilled water, 17β-estradiol (1 mg/kg, ig) and ESE (0-5 and 1 g/kg, ig) for 11 weeks. Serum calcium, phosphorus, estradiol,
bone gla protein concentrations and serum alkaline phosphatase activity were measured. Bone density was assayed by dual-energy X-ray absorptiometry. The undecalcified longitudinal proximal tibial
metaphysical sections were cut and stained for the bone histomorphometric analysis. Results: In OVX rats, alkaline phosphatase
activity in serum was markedly increased by ESE treatment, which had no
obvious influence on the body weight. Meanwhile, atrophy of uterus and
descent of bone mineral density were suppressed by ESE treatment. In addition, ESE completely corrected the decreased concentrations of calcium and E(2) in serum observed in OVX rats. Histological results also showed ESE prevented the increases in trabecular
separation (Tb. Sp) in OVX rats whereas it did not alter trabecular thickness (Tb. Th) and trabecular number (Tb. N) in OVX rats.
Moreover, ESE had remarkable effect on bone formation rate with bone volume as referent (BFR/BV) and bone formation rate with bone surface as referent (BFR/BS). Conclusion: The findings assessed on the basis of biohemical test, bone mineral density and histomorphometric parameters show that aqueous extract of
Epimedii sagittatum has a definite antiosteoporotic effect and can prevent
the OVX-induced bone loss in rats.

L10 ANSWER 8 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2007040449 EMBASE
TI Survival and antigen expression of human cord blood karyocytes in brain of
hypoxic-ischemic newborn rats.
AU Zhu, Mei-Ling, Dr. (correspondence); Luo, Wei-Qiong; Zou, Cui-Xian
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AU Li, Yan; Na, Xiao-Dong; Lei Jun-Xia, X.; Xiang, Peng; Zhang, Xiu-Ming; Li,
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AU Peng, Ai-Jun
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SO Chinese Journal of Clinical Rehabilitation, (10 Oct 2006) Vol. 10, No. 37,
pp. 1-3.
Refs: 10
ISSN: 1671-5926 CODEN: ZLKHAH
CY China
DT Journal; Article
FS 025 Hematology
029 Clinical and Experimental Biochemistry
005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
LA Chinese
SL English; Chinese
ED Entered STN: 12 Mar 2007
Last Updated on STN: 12 Mar 2007
AB Aim: To observe the survival and antigen expression of human cord blood
karyocytes in hypoxic ischemicen encephalopathy (HIE) newborn rats.
Methods: The experiment was carried out at Laboratory of Stem Cell
Research, Shenzhen Baoan Blood Station from September 2002 to March 2004.
(1) Hespan sedimentation was used to separate karyocytes from
human cord blood. (2) A total of 64 F344 newborn rats aged 1 day from 5
nests were divided into three groups randomly according to
nests: normal group, no intervention; model group: the hypoxic ischemic
models were made by left carotid artery ligation with hypoxia of 0.08

volume fraction for 3 hours; human cord blood karyocytes group: human cord
blood karyocytes (1.0-2.0)x10(6) were stereotaxically injected 24 hours
after establishing models. (3)On day 42, the Morris water maze test was performed to evaluate the pups' spatial learning and memorying
abilities. All pups were then killed at week 10 under drugged state.
Pathological diagnosis, HE staining and indirect immunofluorescence were
used to evaluate the living and differentiation state of human cord blood
karyocytes in HIE rats' brain. Results: Of the 64 rats, 20 rats died in
the experiment, and 17, 11 and 16 rats in the normal group, model group
and human cord blood karyocytes group, respectively were involved in the
result analysis. (1) Result of HIE group: The rats in the model group
appeared behavioral disturbance. Pathological section appeared cell
degeneration, necrosis, phagocytosis of glial cells, vascular cannula,
tuberculation of glial cells induced by typical hypoxia and ischemia. (2)
Morris water maze test showed that at day 42 the spatial
recognition and memory ability of the rats in human cord blood karyocytes
group was better significantly than that in the model group (P < 0.01),
which had insignificant difference with normal control group. (3)
Pathological diagnosis, HE staining and indirect immunofluorescence showed
that a mass of transplanted cells in the entering needle part, distributed
in a mass or scatteredly, migrated towards around in the human cord blood
monocyte group; Blood wall of left brain showed a plenty of cell
migration; Expressive rate of glial fibriliary acidic protein in
transplanted cells was 4.59%, and the positive expressive rate of
neuron-specific enolase was 2.68%. Conclusion: Human cord blood
karyocytes can survive partially at the hypoxic-ischemic damaged brain of
newborn rats, express glial fibriliary acidic protein and neuron-specific
enolase antigen, and effectively improve the functional defect of hypoxic
ischemic newborn rats.

reserved on STN
AN 2006054628 EMBASE
TI Bone metabolism changes of the rats with diabetic osteoporosis and the intervention effect of Shuanghuang yigu recipe.
AU Li, Sai-Mei, Dr. (correspondence); Chen, Chang-Qing; Xiong, Li-Hua; Deng, Chang-Qing; Wang, Zhi-Gao; Zhang, Xin-Liang; Zhu, Yan-Fang; Mo, Wei
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AU Yang, Yan-Hong
CS Department of Geriatrics, People's Hospital of Guangdong Province, Guangzhou 510080 Guangdong Province, China.
SO Chinese Journal of Clinical Rehabilitation, (21 Sep 2005) Vol. 9, No. 35, pp. 187-189.
Refs: 5
ISSN: 1671-5926 CODEN: ZLKHAH
CY China
DT Journal; Article
FS 010 Obstetrics and Gynecology
027 Biophysics, Bioengineering and Medical Instrumentation
003 Endocrinology
030 Clinical and Experimental Pharmacology
033 Orthopedic Surgery
037 Drug Literature Index
LA English
SL English; Chinese
ED Entered STN: 3 Mar 2006
Last Updated on STN: 3 Mar 2006
AB Background: Estradiol is generally recognized to effectively prevent and treat osteoporosis in patients with menopause, but its side effect and possible risk restricts its application. Traditional Chinese medicine is noticed for its crude origin, concept of wholism and multiple target point effect. Objective: To establish the model of rat with diabetic osteoporosis after menopause by the compound method of ovariectomy plus streptoxotocin, and to probe into the therapeutic effect of shuanghuang yigu recipe on the osteoporosis in rats with diabetics from bone metabolism angle and its dose-effect relationship. Design: Completely randomized design and controlled experiment. Setting: Department of

Diabetics, First Affiliated Hospital, Guangzhou University of Traditional Chinese Medicine. Materials: The experiment was carried out in the key laboratory of Chinese Medicine Therapy of Difficult and Complicated Diseases, Guangzhou University of Traditional Chinese Medicine from June to December 2002. Totally 150 Sprague Dawley (SD) female rats of clean class were recruited and randomly divided into 5 group: namely, sham-operation, model group, shuanghuang yigu recipe 23.00, 5.75 g/kg group and nilestriol group with 30 rats in each group. Methods: (1) Model of rats with ovariectomy: The rats were anesthetized with the antisepsis by iodine, the nick was cut along the middle line of the back and from up to bottom. Then the uterus angle was tied and cut off and the ovary was extirpated. The treatment of the sham-operation group was the same as model groups except that the ovary did not need to be extirpated. (2) Diabetic rats model with overiectomy: One week after the ovariectomy, rats were fasted for 12 hours. Next step was to intraperitoneally inject streptozotocin (STZ) with the dosage of 45 mg per kilogram. The blood sample should be drawn at the time of 24 hours and 72 hours later separately by cutting tails. Then blood glucose was tested with blood glucose monitor of American Abbott Laboratories Ltd. The rats whose blood glucose was higher than 11.1 mmol/L were recruited. (3) Diabetic osteoporosis rats model with ovariectomy: After the overiectomy were performed in the diabetic osteoporosis rats, the rats were raised. Deoxypyridinoline (DPD) and biomechanical index were tested, if they were significantly lower than that of the normal control group, the models were considered to be successfully established. (4) Grouping intervention. Shuanghuang yigu 23.00, 5.75 g/kg groups and nilestriol group were given 23.00 g/kg, 5.75 g/kg, 0.33 mg/kg of corresponding drugs after the success of model making. Traditional Chinese medicine was made into liquid by

adding distilled water with the dosage of 1 g/mL and the rats were stomach-perfused in the morning and evening. The nilestriol group was accepted intragastric administration every 4 weeks with the dosage of 0.15 g/L. The whole duration of experiment was 24 weeks. (5) Body mass of the rats was weighted at the end of the experiment; Fasting urinary calcium and urinary creatinine were tested with standard method after urine and blood of venous sinus of orbit were collected. Urinary deoxypyridinoline was used with high performance liquid chromatography; Diastatic hemoglobin (HbAlc) was tested with immune agglutination method; estrogen (E2), Calcitionin (CT), bone gla protein (BGP) and bone alkaline phosphatase (BALP) were tested with Radioimmunoassays. (6) Statistical analysis: Analysis of variance was used for the comparison of multi-groups and t test was used for comparison between groups. Main outcome measures: Comparison of bone metabolism, biochemical criterion of blood and urine as well as body mass.

Results: During the course of experiment, 98 rats were died or failed to be model. In the long run, 52 rat data was put into final analysis. (1) At the end of experiment, the body mass and estrogen level in the model group, shaunghuang yigu recipe 23.00 g/kg group and 5.75 g/kg group and nilestriol group were significantly lower than that in the sham-operation group ($P < 0.01$). And levels of diastatic hemoglobin (HbAIc) and bone alkaline phosphatase (BALP) in these groups were significantly higher than that in the sham-operation group ($P < 0.01$). (2) The urinary DPD/Cr and urinary Ca/Cr in the model group were significantly higher than that in the sham-operation group ($P < 0.01$). Calcitionin (CT) of model group was significantly lower than that in the sham-operation group ($P < 0.05$). The urinary DPD/Cr and urinary Ca/Cr in the sham-operation group, shuanghuang yigu recipe 23.00 g/kg group, 5.75 g/kg group and nilestriol group were significantly lower than that in the model group ($P < 0.05$-0.01). And the difference of the groups was not significant. (3) The estrogen level in the nilestriol group was

significantly higher than that in the shuanghuang yigu recipe 23.00 g/kg
and 5.75 g/kg group and model group (P < 0.01). Calcitionin (CT) of
shaunghuang yigu 23.00 g/kg, 5.75 g/kg groups was higher than that in the
model group and nilestriol group (P < 0.05). And the shuanghuang yigu
recipe 5.75 g/kg group was shown the most significant difference (P <
0.01). (4) Bone gla protein (BGP) in the model group was close
to that in the sham-operation group (P > 0.05), BGP in the shuanghuang
yigu recipe 23.00 g/kg and 5.75 g/kg group and nilestriol group were
significantly higher than that in the sham-operation group and model group
(P < 0.05-0.01), and the shuanghuang yigu recipe 23.00 g/kg group had most
significant increase (P < 0.01). Conclusion: Shuanghuang yigu recipe can
restrain the absorption and promote the bone formation by
reducing the excretion of DPD/Cr and Ca/Cr and improving the level of CT
and BGP. Shuanghuang yigu recipe was showed to have more significant
effects than nilestriol group but the dose-effect relationship cannot be
found out.

L10 ANSWER 10 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2005502225 EMBASE
TI Effect of Yigu capsule drug-containing serum on the expression of
osteoprotegerin mRNA in osteoblasts.
AU Zhu, Xiao-Feng (correspondence); Sun, Sheng-Yun; Zheng, Shi-Fu; Chen,
Chao; Li, Jie-Hua
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AU Zhang, Rong-Hua; Cai, Yu; Wang, Ting-Chun
CS School of Pharmacy, Jinan University, Guangzhou 510630 Guangdong Province,
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AU Zhu, Xiao-Feng (correspondence)
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SO Chinese Journal of Clinical Rehabilitation, (21 May 2005) Vol. 9, No. 19,

pp. 180-182.
Refs: 11
ISSN: 1671-5926 CODEN: ZLKHAH
CY China
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LA Chinese
SL English; Chinese
ED Entered STN: 28 Nov 2005
Last Updated on STN: 28 Nov 2005
AB Aim: To observe the effects of Yigu capsule drug-containing serum on osteoprotegerin mRNA in rats' osteoblasts cultured in vitro. Methods: The experiment was carried out in the Cell and Protein Engineering Laboratory, College of Life Science Technology, Jinan University from May 2004 to February 2005. Twenty male 12-month-old SD rats were randomly divided into two groups: traditional Chinese medicine (Yigu capsule, which consisted of 8 Chinese herbs, wuch as epimedium, prepared rehmannia, wolfberry fruit, achyranthes root, etc.) group (n = 10) and distilled water control group (n = 10). The drug-containing serum and control serum were prepared with the method of gastric perfusion, and the osteoblasts in skull of new-born rats were separated and cultured. After passage, they were randomly divided into drug-containing serum group (n = 8) and control serum group (n = 8), and then the relative expression value of osteoprotegerin mRNA in osteoblasts were determined with the technique of reverse transcription-polymerase chain reaction specific electrophoresis strap at 24 and 48 hours of culture respectively, and the concentration of osteoprotegerin in supernatant fluid(end concentration of 200 mL/L) was detected with enzyme-linked immunosorbent assay at 48, 72 and 96 hours of culture respectively. Results: No rat died in both groups (n = 10 respectively), and the taken serum was normally used for cell cultivation. 1 Four hours after inoculation, stick to wall and extension of osteoblasts were observed. With the prolongation of culture, the osteoblasts extended more processus, the shape was mononuclear, polygon and fusiform shapes;

Two days after cultivation, almost all the osteoblasts stuck to wall, the shapes were mainly polygon or fusiform; About 6 days after cultivation, the osteoblasts stuck to almost the complete wall of the bottle, arranged like slabstone; Overlapped growth occurred after the spread of single layer in the culture bottle, the passage cells began to mineralize and nod at about 15 days. 2 Specific electrophoresis strap showed that the expressions of osteoprotegerin mRNA in osteoblasts 24 and 48 hours after cultivation were higher in the Yigu capsule drug-containing serum than in the blank serum[(0.196 ± 0.015, 0.236 ± 0.016), (0.152 ± 0.018, 0.206 ± 0.022), P < 0.01]. 3 The expressions of osteoprotegerin protein in osteoblasts 48, 72 and 96 hours after cultivation were obviously higher in the Yigu capsule drug-containing serum (end concentration of 200 mL/L) than in the blank serum[(0.123 0 ± 0.012 8, 0.168 1 ± 0.013 0, 0.198 3 ± 0.018 6), (0.106 7 ± 0.010 6, 0.138 5 ± 0.012 6, 0.158 8 ± 0.012 1), P < 0.01 or P < 0.05]. Conclusion: Yigu capsule drug-containing serum can promote the expression of osteoblasts, indicating that Yigu capsule has the role in inhibiting the link of bone resorption by its influence on osteoblasts, but whether it plays a role in other signal pathways still needs to be investigated.

L10 ANSWER 11 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN DUPLICATE 1

AN 2005:543071 BIOSIS

DN PREV200510326365

TI Viability of human chondrocytes in an ex vivo model in relation to temperature and cartilage depth.

AU Drobnic, M. [Reprint Author]; Mars, T.; Alibegovic, A.; Bole, V.; Balazic, J.; Grubic, Z.; Brecelj, J.

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SO Folia Biologica (Prague), (2005) Vol. 51, No. 4, pp. 103-108. CODEN: FOBLAN. ISSN: 0015-5500.

DT Article

LA English
ED Entered STN: 1 Dec 2005
Last Updated on STN: 1 Dec 2005
AB Chondrocytes in human articular cartilage remain viable post-mortem. It
has however not been established yet how the storage temperature affects
their survival, which is essential information when post-mortem cartilage
is used for toxicologic studies. Our aim was to construct a simple model
of explanted knee cartilage and to test the influences of time and
temperature on the viability of chondrocytes in the ex vivo conditions.
Osteochondral cylinders were procured from the cadaveric femoral condyles.
The cylinders were embedded in water-tight rubber tubes, which
formed separate chondral and osteal compartments. Tubes were
filled with normal saline, without additives, to keep chondrocytes under
close-to-normal conditions. The samples were divided into two
groups stored at 4 degrees C and 35 degrees C, respectively. Three
samples of each of these two groups were analysed at the time of removal,
and then three and nine days later. Images of Live-Dead staining were
scanned by a confocal laser microscope. Count of viable chondrocytes in
four regions, from surface to bone, was obtained using image
analysis software. The regression model revealed that the number of
viable chondrocytes decreased every day by 19% and that an increase in
temperature by 1 degrees C decreased their viability by 5.8%. The
temperature effect fell by 0.2 percentage points for every 100 gin from
the surface to the bone. Herein we demonstrate that
chondrocytes remain viable in the ex vivo model of human knee cartilage
long enough to be able to serve as a model for toxicologic studies. Their
viability is, however, significantly influenced by time and temperature.

L10 ANSWER 12 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 2005:480925 BIOSIS
DN PREV200510267510

TI Volume localized in vivo proton MR spectroscopy of multiple myeloma:
Variation of water-fat ratio in patients receiving chemotherapy correlates with clinical response.
AU Oriol, Albert [Reprint Author]; Valverde, Daniel; Capellades, Jaume;
Cabanas, Miquel; Arus, Carles; Ribera, Josep-Maria
CS Hosp Germans Trias and Pujol, ICO, Badalona, Barcelona, Spain
SO Blood, (NOV 16 2004) Vol. 104, No. 11, Part 2, pp. 298B.
Meeting Info.: 46th Annual Meeting of the American-Society-of-Hematology.
San Diego, CA, USA. December 04 -07, 2004. Amer Soc Hematol.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 16 Nov 2005
Last Updated on STN: 16 Nov 2005
AB Introduction. Bone marrow magnetic resonance (MR) imaging provides important information in the evaluation of patients with multiple myeloma (MM) but MR assessment of response to therapy is highly subjective. Proton nuclear magnetic resonance spectroscopy (H-1 MRS) may be able to measure the ratio of lipid to water resonance signal intensities (LWR) and thus reflect the relative percentages of cellular and fatty bone marrow within a defined three-dimensional volume (voxel). These measurements could be used to quantify the degree of cytoreduction in MM patients.Patients and Methods. Twenty-one consecutive patients (10 males median age 65 years, range 44-82) with newly diagnosed multiple myeloma underwent a MR exploration of the fifth lumbar vertebral body before the initiation of treatment. Patients completing therapy were reevaluated. Dorso-lumbar imaging studies were carried out in a 1.5T system with a saggital spin-echo T1-weighted sequence (TR 437 ms / TE 15 ms). A 2-cm-thick transverse center section of the L5 lumbar vertebral body was sampled to place the voxel. Spectroscopic data were acquired with a stimulated echo acquisition mode (STEAM) sequence without water suppression with repetition time 5 s and echo time 40 ms. To calculate the area of the water signal, the peak was fit to a single Lorenzian curve centered at 4.75 ppm. The area of the lipid resonances was fit to 3 Lorenzian curves centered at 0.89 (-CH3), 1.34 and

2.2 (-CH2) ppm. The areas obtained were used to calculate the LWR for
each voxel. The LWR was defined as the sum of the area of the 3 lipid
fitted resonances divided by the area of thefitted water
resonance.Results. The spectra showed a water peak and a
compounded lipid peak separatedby approximately 3.1 ppm. LWRs
ranged from 0 to 15 (mean 1.748, SD 3.741). Seven patients were treated
with melphalan and prednisone (MP) and 14 received 3cycles of vincristine,
BCNU, cyclophosphamide, melphalan and prednisone alternating with 3 cyles
of vincristine, BCNU, doxorrubicin and dexametasone (VBCMP/VBAD). Therapy
was interrupted for at least 4 weeks before the MR evaluation.Two patients
under MP could not be reevaluated. One patient under VBCMP/VBAD suffered
extensive L5 collapse that invalidated a second MR study. Four patients
progressed under treatment and only I of them could be re-submitted to MR.
A patient who achieved a partial response after VBCMP/VBAD refused to
undergo a MR re-evaluation. Pre and post treatment MR studies were
available in 14 patients (progression 1, no response 3, partial response
3, complete response 7).LWR increased in 11/14 patients (78%) (p=0.034).
However. 7/7 (100%) completeresponders presented a LWR increase (p=0.018)
while only 4/7 (57%) non-responders did. No significant differences were
observed among partial responders orpatients non-responding or
progressing.Conclusions. Changes i LWR as assessed by H-1 NMR correlated
with response to chemotherapy in patients with multiple myeloma, thus this
technique may be used to measure noninvasively the response to treatment
in these patients.

L10 ANSWER 13 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 2003:356706 BIOSIS
DN PREV200300356706
TI Direct Measurement of B-CLL Cell Production and Turnover In Vivo.
AU Messmer, Davorka [Reprint Author]; Messmer, Bradley T. [Reprint Author];

Cesar, Denise [Reprint Author]; Albesiano, Emilia [Reprint Author];
Telusma, Gloria [Reprint Author]; Damle, Rajendra [Reprint Author]; Allen,
Steven L. [Reprint Author]; Kudulkar, Prasad [Reprint Author]; Kolitz,
Jonathan E. [Reprint Author]; Loscalzo, John [Reprint Author]; Ho, Cuong
[Reprint Author]; Rai, Kanti R. [Reprint Author]; Hellerstein, Marc
[Reprint Author]; Chiorazzi, Nicholas [Reprint Author]
CS Experimental Immunology, North Shore LIJ Research Institute, Manhasset,
NY, USA
SO Blood, (November 16 2002) Vol. 100, No. 11, pp. Abstract No. 634. print.
Meeting Info.: 44th Annual Meeting of the American Society of Hematology.
Philadelphia, PA, USA. December 06-10, 2002. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003
AB Classically, B-CLL is considered a disease that results from the progressive accumulation of a functionally inert and slowly dividing B cell clone. The rate and extent of this accumulation appears to affect clinical course and outcome, and in vitro data suggest that the major reason for cellular accumulation is a defect in apoptosis.
However, there have been very few in vivo studies of B-CLL cell kinetics to support these notions, primarily because the labels used to quantify such measurements can be toxic to humans (e.g., 3H-dT or BrdU). We have employed a non-radioactive, stable isotopic labeling technique that utilizes heavy water (2H2O) to mark the DNA of newly generated cells. This approach has enabled us to follow the in vivo kinetics of B-CLL cells and polymorphonuclear leukocytes (PMNL) during a 12 week labeling period and a 12-16 week washout period. Labeled PMNL reached a plateau at 4 weeks and were absent by week 20. This rapid influx of labeled PMNL and rapid washout after discontinuance of 2H2O is consistent

with the short transit time of PMNL from the bone marrow through the blood and to solid tissue. Since the PMNL completely turn over within 4 weeks, the amount of 2H incorporation in their DNA after that period serves as an internal reference for the maximum percentage of 2H incorporation attainable within each patient. In the majority of patients, incorporated label was observed in the CD19+ CD5+ cell compartment after 2 weeks. For patients in whom the absolute lymphocyte count (ALC) does not change appreciably over the labeling period, the number of new cells produced must equal the number of cells lost. Those patients that showed a rapid appearance of labeled cells without a significant change in ALC surprisingly had up to 5% of the clone replaced per week. In these cases, the extrapolated half lives for the B-CLL cells ranged from apprx10 - 20 weeks. In addition, in at least one case there was a clear delay in the appearance of labeled cells followed by continued increase in the percentage of labeled cells 4 months beyond the end of the labeling period. This suggests that, in this patient, the cells were born and retained in a separate compartment from the peripheral blood (e.g., bone marrow or lymph node or spleen) and were slowly released into the periphery. The results indicate a dynamic interplay between proliferation and death in B-CLL cases with stable as well as with increasing ALC. The surprisingly high level of new cell entry into the peripheral pool indicates that the turnover rate of leukemic cells is higher than might have been assumed. Since in those cases with stable ALC, the proliferative rate equals he death rate, the degree of leukemic cell death must also be more significant than assumed. For those patients in whom the ALC varies over time, we are now able to determine, in an individual patient, whether these changes are due to alterations in either the proliferative or death rates. This approach should help to understand differences the in vivo biology of B-CLL cells among different patients,

and possibly to identify subgroups of patients based on these kinetics.
Such analyses may be valuable in prognosis as well as in the choice of
chemotherapeutic agents.

L10 ANSWER 14 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 2001:53319 BIOSIS
DN PREV200100053319
TI Nasal encephaloceles.
AU Hoving, Eelco W. [Reprint author]
CS Department of Neurosurgery, University Hospital Groningen, Hanzeplein 1,
9700 RB, Groningen, Netherlands
e.w.hoving@nchir.azg.nl
SO Child's Nervous System, (November, 2000) Vol. 16, No. 10-11, pp. 702-706.
print.
ISSN: 0256-7040.
DT Article
LA English
ED Entered STN: 24 Jan 2001
Last Updated on STN: 12 Feb 2002
AB Nasal encephaloceles can be divided into frontoethmoidal and
basal encephaloceles. Both conditions are very rare, but frontoethmoidal
encephaloceles show a relatively high incidence (1:5,000) in Southeast
Asia. The pathogenesis of encephaloceles may be explained by a
disturbance in separation of surface ectoderm (epithelial layer)
and neurectoderm (nervous tissue) in the midline just after closure of the
neural folds. It should be regarded as a 'late' neurulation defect taking
place during the 4th gestational week. Apoptosis appears to be related to
this separation process. Frontoethmoidal encephaloceles can be
recognized as a facial mass covered with normal skin, while basal
encephaloceles may cause nasal obstruction or symptoms related to
herniation of basal structures. Diagnostic CT or MR imaging delineates
the anatomy of the herniated mass. Therapy for frontoethmoidal
encephaloceles consists in excision of the cele, water-tight
closure of the dural defect and reconstruction of the skull defect. Basal
encephaloceles may harbour vital herniated structures which should be
saved. Hydrocephalus should be dealt with first, followed by elective
single-stage reconstructive surgery. The prognosis appears to be better

for patients with frontoethmoidal encephaloceles than for patients with occipital or parietal encephaloceles, and it depends largely on the presence of additional congenital anomalies of the brain. The differential diagnosis of a nasal mass must include nasal glioma, dermoid cyst, and nasal polyp.

L10 ANSWER 15 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN DUPLICATE 2
AN 1999:222212 BIOSIS
DN PREV199900222212
TI Dosimetry of hip irradiation for the prevention of heterotopic bone formation after arthroplasty.
AU Evans, Michael D. C. [Reprint author]; Patrocinio, Horacio J.; Souhami, Luis; Tanzer, Michael; Podgorsak, Ervin B.
CS McGill-Medical Physics Unit, Montreal General Hospital, 1650 Avenue Cedar, Montreal, PQ, H3G 1A4, Canada
SO International Journal of Radiation Oncology Biology Physics, (March 5, 1999) Vol. 43, No. 5, pp. 1161-1165. print.
CODEN: IOBPD3. ISSN: 0360-3016.
DT Article
LA English
ED Entered STN: 7 Jun 1999
Last Updated on STN: 7 Jun 1999
AB Purpose: The dosimetry of hip irradiation for the prevention of heterotopic bone formation following arthroplasty is complicated by the use of custom shielding in the treatment portal, and the fact that irradiation is usually required during a 48 hour period following surgery.
Both the machine output and depth dose factors of the resulting fields are modified by the presence of the shielding blocks. A simplified dosimetric approach, based on correction factors for both the output and depth dose as a function of field geometry is presented for various megavoltage energy beams. Materials and Methods: Measurements of relative dose factors (RDF) and percentage depth dose (PDD) were carried out for different combinations of field size, block size and separation between adjacent blocks. Both RDF and PDD measurements were made in a water phantom. Ratios of RDF and PDD were obtained by

dividing individual measurements or curves by the corresponding values for the open field (i.e., without blocks). The average values of these ratios constitute the correction factors to be applied for a given MU or treatment time calculation. Results: Extensive RDF and PDD measurements reveal that for the field and block dimensions of interest the correction factors for RDF can be parameterized as a function of separation between two adjacent blocks and beam energy alone and the depth correction factors are additionally only a function of depth. The correction factors for depth dose are equally valid for fixed source-skin distance techniques (that use PDD) and fixed source-axis distance techniques (that use TMR). Conclusion: A simple model for the calculation of output in hip irradiation is presented for the situation where the use of computer-based algorithms may not be practical. The model accurately predicts the RDF of the treatment portal to within 2% and the PDD to within 2% for the range of field sizes, block sizes, block gaps and beam energies of interest ignoring other variables.

L10 ANSWER 16 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN DUPLICATE 3
AN 2000:119397 BIOSIS
DN PREV200000119397
TI Importance of bioavailable calcium drinking water for the maintenance of bone mass in post-menopausal women.
AU Costi, D. [Reprint author]; Calcaterra, P. G.; Iori, N.; Vourna, S.; Nappi, G.; Passeri, M.
CS Istituto di Clinica Medica Generale e Terapia Medica, Via Gramsci 14, 43100, Parma, Italy
SO Journal of Endocrinological Investigation, (Dec., 1999) Vol. 22, No. 11, pp. 852-856. print.
CODEN: JEIND7. ISSN: 0391-4097.
DT Article
LA English
ED Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002
AB The aim of this research was to establish the importance of calcium intake through mineral water on vertebral bone density in

women. To this purpose, we examined 255 women divided into two groups: those regularly drinking a high calcium content mineral water (group A; number=175) and those using different type of water with a lower calcium content (group B; number=80). Their dietary daily calcium intake was determined by means of a validated questionnaire (N.I.H. Consensus statement) and vertebral bone density was measured by Dual-Energy X-ray absorptiometry (Unigamma-plus ACN densitometer). Women in group A ingested a significantly higher quantity of calcium in water than women in group B (mean difference 258 mg; 95% confidence limits: 147-370 mg). The average bone density values were slightly but significantly higher in group A as compared to group B (mean+-SD: 1.044+0, 15 vs 1.002+0, 14; p=0.03). In addition to age, BMI and menopausal status, calcium intake was a significant predictor of spinal BMD. These 4 variables explained about 35% of the spinal BMD variance. When the analysis was repeated separately for pre- and post-menopausal subjects, calcium remained a significant predictor in post-menopausal women (t=2.28; p=0.02), but not in premenopausal women. These results underline the importance of a lifelong daily calcium intake, resulting by the regular drinking of high bioavailable calcium water, in order to maintain bone mass after the menopause, in comparison to the use of a lower content calcium water.

L10 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1996:464543 CAPLUS
DN 125:96050
OREF 125:17899a,17902a
TI Process for the separation of lipids from biological materials
IN Hiltunen, Raimo Vilho Kari; Vuorela, Heikki Juhani
PA Helsinki University Licensing Ltd. Oy, Finland
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 9616712 A1 19960606 WO 1995-FI645
19951122
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK,
EE, ES,
FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,
LT, LU,
LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
SE, SG,
SI, SK
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB,
GR, IE,
IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,
ML, MR,
NE, SN, TD, TG
US 5759549 A 19980602 US 1994-345039
19941125
AU 9539303 A 19960619 AU 1995-39303
19951122
EP 793523 A1 19970910 EP 1995-937097
19951122
EP 793523 B1 19980923
R: AT, BE, CH, DE, DK, ES, FR, GB, LI, NL, PT, SE
AT 171384 T 19981015 AT 1995-937097
19951122
FI 9702161 A 19970723 FI 1997-2161
19970521
FI 104619 B1 20000315
PRAI US 1994-345039 A 19941125
WO 1995-FI645 W 19951122
AB Materials and methods are presented for the isolation of lipids
from a
mixture of lipids in biol. materials using a supercrit. fluid
extraction process.
Lipids are isolated by methods according to the invention in an
amount
approx. equal to the amount of the specified material in the
mixture prior to
extraction Thus, from heat sterilized and freeze-dried tissue
such as brain or
bone marrow from pig, reindeer, cow, or other similar animals,
lipids first are extracted with a mixture of
ethanol-diethylether (4:1,
volume/volume). The solvent is then evaporated and the lipids
are dissolved in
acetone. Lipids are then adsorbed from the acetone solution
onto finely
divided silica, and the acetone filtered off. The ratio of
lipids
to adsorbent material may vary within wide limits, from approx.
15% to
approx. 75% by weight A suitable amount in the case of silica
of the particle

size and diameter employed is approx. 30% by weight The obtained adsorbent
material with adsorbed neurolipids is then charged into an extraction vessel
and supercrit. CO2 is then fed into the extraction vessel from below. In the
present example, the extraction vessel containing the adsorbent material is
operated at a temperature of 65-75 °C and a pressure of about 600 bars,
under which conditions the neutral lipids were removed almost quant. from
the adsorbent material. After passing through the extraction vessel, the gas
passes to a separation vessel where its pressure is reduced to atmospheric pressure.
Under such conditions, the gas volatilizes and the neutral lipids are
separated The resulting lipids are than removed from the separation vessel. The
adsorbent material with adsorbed phospholipids and glycolipids in pure
form may be recovered through a valve at the bottom of the extraction chamber.
Lipids thus obtained may be suitable for use as pharmaceuticals or
nutritional additives.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN DUPLICATE 4
AN 1996:230298 BIOSIS
DN PREV199698794427
TI Evaluation of multidrug resistance phenotype in acute leukemia by
determination of nuclear efflux of tetrahydropyranyl-doxorubicin using
confocal laser microspectrofluorometry.
AU Morjani, H.; Pignon, B.; Vilque, J. P.; Millot, J. M.; Lartigue, B.;
Simon, G.; Etienne, J. C.; Potron, G.; Manfait, M. [Reprint author]
CS Laboratoire de Spectroscopie Biomoleculaire, UFR de Pharmacie, 51096 Reims
Cedex, France
SO Annales de Biologie Clinique, (1996) Vol. 54, No. 1, pp. 9-15.
CODEN: ABCLAI. ISSN: 0003-3898.
DT Article
LA French
ED Entered STN: 28 May 1996
Last Updated on STN: 11 Jul 1996

AB Confocal microspectrofluorometry allows the analysis of fluorescence
molecules such as anthracylines in isolated living cells. An optical
microscope fitted with a phase-contrast 100 X water-immersion
objective enables simultaneous observation of the sample, focusing of the
laser beam on the selected cell fraction (nucleus) and collection of the
fluorescence emitted from the sample. The resulting intranuclear spectra
are interpreted according to a quantitative model of the fluorescence
spectra of both free and DNA-bound anthracycline. The intranuclear drug
concentration can thus be determined. This technique has been applied to
blast cells collected in patients with acute leukemia. Leukemic cells are
aspirated from bone marrow, separated by Ficoll
sedimentation and resuspended in RPMI-1640 containing 10% fetal calf serum
and 200 nM tetrahydropyranyl-doxorubicin (THP-DOX). After one hour, 20
cells are analyzed and the mean nuclear drug content is determined (C-1).
Cells are then resuspended in the same medium but without anthracycline
for 3 hours and the mean intranuclear drug concentration is then also
determined (C-3). From C-1 and C-3 the retention rate (RR) is calculated.
Firstly, the accuracy of the method was checked. In 4 AML patients, two
different samples aspirated on the same day were divided into
two portions. Thus, two measurements were made on each one (4 values per
patient). Coefficients of variation were satisfactory (4, 6, 12, and
12%). Secondly, blast cells collected in patients with AML and ALL at
diagnosis or in relapse were studied. P-glycoprotein (P-gp) and CD34
expression was also studied using respectively immunohistochemistry land
flow cytometry. Results obtained from the first 21 patients showed that
there was no correlation between RR and either P-gp or CD34 expression.
This could result from the efflux of THP-DOX by other mechanisms and/or
low sensitivity of the staining technique.

L10 ANSWER 19 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN DUPLICATE 5
AN 1995:202265 BIOSIS
DN PREV199598216565
TI The Accuracy of Volumetric Bone Density Measurements in Dual X-Ray Absorptiometry.
AU Sabin, M. A.; Blake, G. M. [Reprint author]; Maclaughlin-Black, S. M.;
Fogelman, I.
CS Dep. Nuclear Med., St. Thomas Street, Guy's Hosp., London SE1 9RT, UK
SO Calcified Tissue International, (1995) Vol. 56, No. 3, pp. 210-214.
CODEN: CTINDZ. ISSN: 0171-967X.
DT Article
LA English
ED Entered STN: 23 May 1995
Last Updated on STN: 23 May 1995
AB New developments in dual x-ray absorptiometry (DXA) allow the performance
of high precision anteroposterior (AP) and lateral scans of spinal
bone mineral density (BMD, units: g/cm-2) without the patient moving from the supine position. Data from both projections may be
combined to give an estimate of the true volumetric bone mineral density (VBMD, units: g/cm-3) of the lumbar vertebral bodies. This report
presents a cadaver study designed to validate DXA measurements of volumetric bone density. Sections of whole lumbar spine were scanned in AP and lateral projections in a water tank to simulate soft tissue. Individual vertebrae were then divided to separate the vertebral body from the neural arch, and vertebral body volume was measured using the displacement of sand. The bone
mineral content (BMC) of vertebral bodies and neural arches was measured
by ashing at 250 degree C for 60 hours followed by 500 degree C for a
further 24 hours. The results showed that DXA scanning systematically
underestimated ashing data by 14% for AP BMC, 33% for vertebral body BMC,
23% for vertebral body volume, and 12% for VBMD. Despite these significant systematic errors, the DXA measurements and ashing values were
highly correlated (r = 0.979-0.992). The results suggested that after
allowing for the systematic errors, lateral DXA parameters related closely

to true BMC, volume, and VBMD.

L10 ANSWER 20 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN DUPLICATE 6
AN 1991:160840 BIOSIS
DN PREV199191086640; BA91:86640
TI MECHANISM OF CLASTOGENIC AND CO-CLASTOGENIC ACTIVITY OF CREMOPHORE WITH
BENZENE IN MICE.
AU AU W W [Reprint author]; ANWAR W; PAOLINI M; RAMANUJAM S; CANTELLI-FORTI G
CS DEP PREVENTIVE MED COMMUNITY HEALTH, UNIV TEXAS MED BRANCH, GALVESTON,
TEXAS 77550, USA
SO Carcinogenesis (Oxford), (1991) Vol. 12, No. 1, pp. 53-58.
CODEN: CRNGDP. ISSN: 0143-3334.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 1 Apr 1991
Last Updated on STN: 2 Apr 1991
AB Cremophore E1 (CR), a frequently used solubilizer and emusifier in the
pharmaceutical, cosmetic and animal-raising industries, is made up of
ethylene oxide and castor oil. Since ethylene oxide has been shown to be
a potent genotoxic agent, we have studied the clastogenic activity of CR
and its coclastogenic activity with benzene (BZ) in mice. Male CD1 mice
were divided into untreated, vehicle control and experimental
groups. Mice in the experimental groups were treated orally with 0.03,
0.3 or 3% CR in water, 440 mg/kg BZ in olive oil, BZ plus the
three different doses of CR (1 h apart) or BZ plus 3% CR separated
by 1, 3 and 5 h intervals. Mice were killed at 30 h after the treatment
for the single-treatment groups and after the first treatment for the
combined treatment groups. Bone marrow cells were harvested for
determination of micronuclei (MN) frequencies in polychromatic
erythrocytes (PCE). The presence of known genotoxic metabolites of
benzene (phenol and trans,trans muconic acid) was quantitated in collected
urine. The effect on hepatic cytochrome P450 isoenzyme expression in
livers of treated mice were also analyzed. We found that CR did not

induce any significant or dose-dependent increase in MN. However, CR
enhanced the clastogenic activity of BZ in a dose-dependent manner (from
41.6 to 47.3, 60.5 and 67.1 MN/1000 PCE respectively; P < 0.05). The
combined treatment showed an inverse time-dependent change in MN
frequencies when CR was administered at 1, 3 and 5 h after BZ (41.6 to
67.1, 43.3 and 42.0 MN/1000 PCE respectively). The enhancement effect of
CR is apparently due to its ability to induce significantly the cytochrome
P450I family when CR was administered 1 h after treatment with BZ.
However, no positive synergistic effect was observed when the combined
treatment intervals were extended to 3 and 5 h. Enhanced induction of
these isoenzymes is correlated with increased metabolic activation of BZ
to excrete increased amounts of trans,trans muconic acid, the putative
active metabolite of BZ, in urine. Our integrated study demonstrates that
an apparently innocuous agent that is consumed by the general population
can enhyance the genotoxic activity of a ubiquitous environmental
carcinogen. The potential existence of this type of interaction in our
daily lives is frequently overlooked and should be investigated.

L10 ANSWER 21 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 1985:223155 BIOSIS
DN PREV198579003151; BA79:3151
TI GROWTH OF INDICATOR PATHOGENIC AND PSYCHROTROPHIC BACTERIA IN MECHANICALLY
SEPARATED BEEF LEAN GROUND BEEF AND BEEF BONE MARROW.
AU RAY B [Reprint author]; JOHNSON C; FIELD R A
CS ANIMAL SCI DIV, BOX 3354, UNIVERSITY STN, UNIV WYOMING, LARAMIE, WYOMING
82071, USA
SO Journal of Food Protection, (1984) Vol. 47, No. 9, pp. 672-677.
CODEN: JFPRDR. ISSN: 0362-028X.
DT Article
FS BA
LA ENGLISH
AB Growth of Escherichia coli, Salmonella anatum, Staphylococcus aureus,
Clostridium perfringens and naturally occurring psychotrophs in

mechanically separated beef (MSB), lean ground beef (LGB) and beef bone marrow (BBM) was studied. Six good grade steers were slaughtered and samples of MSB, LGB and BBM were prepared under proper sanitary care. Six hundred grams of each sample were collected; 100 g were used for chemical analysis. The remaining 500 g were divided into 10-g portions, each mixed with 10 ml of water and either frozen to -20° C or used immediately for bacteriological analysis. For growth studies, samples were inoculated with E. coli or one of the pathogens, incubated at 37° C up to 24 h and enumerated for colony-forming units (CFU) on specific selective agar plates. During the first 8 h of incubation, E. coli and S. anatum multiplied rapidly in MSB and LGB but rather slowly in BBM. By 24 h, both species had multiplied to the same population level. Initial growth of S. aureus was rapid in MSB and LGB, but by 24 h its number was higher in LGB than in MSB or BBM. C. perfringens grew faster in LGB and slower in BBM during the 24-h period. Growth of psychotrophs was determined by incubating the materials at 10°, 7° and 3° C up to 10 days. The psychrotrophs grew fastest in MSB and slowest in LGB at all 3 temperatures, especially at 3° C. Rapid growth of various bacteria in MSB should be considered in its production, storage and subsequent use.

L10 ANSWER 22 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 1979018777 EMBASE
TI The effects of cancer therapy on the nervous system.
AU Allen, J.C.
CS Dept. Ped. Neurol., Mem. Sloan Kettering Cancer Cent., New York, N.Y. 10021, United States.
SO Journal of Pediatrics, (1978) Vol. 93, No. 6, pp. 903-909. ISSN: 0022-3476 CODEN: JOPDAB
CY United States
DT Journal; General Review; (Review)
FS 016 Cancer
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
007 Pediatrics and Pediatric Surgery

008 Neurology and Neurosurgery
LA English
AB Radiation therapy and chemotherapy are the two cytotoxic therapies
currently offered children with cancer. Rapidly dividing
tissues, such as bone marrow and gastrointestinal cells, are
most overtly affected by such therapy; the dose, in major degree, reflects
the tolerance of these organs to the various agents. Organs with less
proliferative activity, such as the CNS, seem less sensitive to the acute
toxic effects of radiation therapy and chemotherapy. The protective
effect of the blood brain barrier also serves to retard the penetration of
water soluble, ionized cytotoxic drugs. Several new factors in
cancer therapy, however, combine to enhance the likelihood of CNS
toxicity: drugs with high lipid solubility, such as the nitrosoureas, have
been introduced into many treatment protocols to maximize CNS penetration;
brain tumor protocols which incorporate several cytotoxic drugs concurrent
with radiation therapy may enhance their separate toxicities;
children with all forms of cancer are surviving longer and relapses are
treated with more intensive cytotoxic regimens, many of which may affect
brain metabolism; and increased survival allows time for the development
and recognition of signs of CNS dysfunction. Knowledge of the deleterious
effects of the cytotoxic modalities on the CNS will guide the oncologist
in modifying dosages of individual agents and altering treatment schedules
to avert long term complications. There is increasing concern that
methotrexate in combination with radiation therapy may cause a chronic,
progressive encephalopathy initially described in acute lymphatic leukemia
patients receiving prophylactic cranial radiation therapy and long term
administration of methotrexate. Other agents may also be implicated in
this delayed type of CNS toxicity. A number of cytotoxic drugs such as
procarbazine, L-asparaginase, 5-fluorouracil, methotrexate, vincristine,
and the nitrosoureas can produce acute CNS reactions. In children, the

drugs that cause the most frequent and most serious morbidity are the
vinca alkaloids, notably vincristine, and methotrexate. These agents are
discussed here in detail.

L10 ANSWER 23 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1975200970 EMBASE
TI Effect of low dietary calcium on chronic cadmium toxicity in rats.
AU Washko, P.W.; Cousins, R.J.
CS Dept. Nutrit., Cook Coll., Rutgers Univ., New Brunswick, N.J. 08903,
United States.
SO Nutrition Reports International, (1975) Vol. 11, No. 2, pp. 113-127.
ISSN: 0029-6635 CODEN: NURIBL
DT Journal
FS 029 Clinical and Experimental Biochemistry
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LA English
AB Experiments were conducted with male rats to evaluate the relationship
between calcium intake and cadmium toxicity. Forty eight rats were
equally divided into four groups. Two groups were fed a purified diet containing 0.6% calcium (NC) and two groups were fed a 0.1%
calcium (LC) diet for an eight wk comparison period. One NC and one LC
group received 25 ppm cadmium (as CdCl(2)) in the drinking water. Growth was depressed in the NC+Cd, LC and LC+Cd groups. Hematocrit
values were decreased in the groups that received Cd. Bone ash content was decreased in the LC groups being lowest in the LC+Cd group.
Renal leucine aminopeptidase (LAP) activity was depressed in the LC+Cd
group while serum LAP activity was not affected. Cd was detected in
highest concentrations in liver and kidney of the LC+Cd groups. The
amount of cadmium binding protein in the liver was closely correlated with
the level of liver cadmium. In a separate short term experiment utilizing larger rats fed the same diet, the uptake of oral (109)Cd into
intestinal mucosa was greater and more radioactivity was associated with a

low molecular weight mucosal protein in the NC rats than the LC rats. The results collectively indicate the level of dietary calcium directly influences the uptake, deposition and toxic properties of ingested cadmium.

L10 ANSWER 24 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1966:110290 BIOSIS
DN PREV19664700110293; BA47:110293
TI Cytochemical study of ascorbic acid in blood elements of healthy persons.
Original Title: Tsitokhimicheskoe izuchenie askorbinovoi kisloty v elementakh krovi zdorovykh lyudei.
AU ESEDOV, E. M.
CS Dagestan Med Inst., Makhachkala, USSR
SO LAB DELO, (1966) Vol. 2, pp. 70-72.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB Ascorbic acid was determined cytochemically in blood and bone marrow cells by a modified Giroud-Leblond method. Dry, fresh, and unfixed smears of peripheral blood and bone marrow were covered with a 10% solution of silver nitrate acidified with glacial acetic acid (pH 2.5-3.0). The smears were stained in the dark for 20 h, then washed with distilled water, and dried in the dark. Ascorbic acid was demonstrated as black, very rarely brown, grains as in the Giroud-Leblond method. The peripheral blood of 50 and bone marrow of 5 healthy persons was investigated. In smears on the peripheral blood 300 leukocytes were counted and in the smears of the bone marrow 500 cells. Since no more than 5-10 hemocytoblasts, myelo-blasts, and erythroblasts were found separately /500 bone marrow cells, up to 20 cells of each of these forms were counted in the smear for a more accurate idea of the content of ascorbic acid in them. The cytochemical investigation revealed that ascorbic acid is contained in all formed elements of the blood and is demonstrated as grains of various sizes, most frequently in the nuclei. The leukocytes were arranged in the

following descending order with respect to the content of ascorbic
aci[plus or minus] eosinophils, lymphocytes, neutrophils, and monocytes.
In dividing cells of the blood the content of ascorbic acid was
normal or low. ABSTRACT AUTHORS: J. Slep

L10 ANSWER 25 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 1965:46419 BIOSIS
DN PREV19654600046425; BA46:46425
TI Clinical chemistry: Theory and practice.
Original Title: Klinische chemie: Theorie und Praxis.
AU RICHTERICH, R.
SO (1965) pp. 448p. Illus. Clinical chemistry: Theory and practice. Klinische
chemie: Theorie und Praxis.
Publisher: S. Karger AG, Basel, Switz.
DT Book
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB This well documented volume is divided into 4 parts and includes
the following topic headings: Part A: Introduction includes: General
principles; Units of measurement; Introduction to statistics; Normal
values; The reliability of laboratory methods; Laboratory apparatus;
Chemicals; The taking of blood; Collection of urine. Part B: Methods of
laboratory determinations includes: General principles; Methods of
separations; Gravimetric analysis; Volumetric analysis; Absorption
photometry; Flame photometry; Enzyme determinations. Part C: Metabolic
studies includes: General principles; Water and electrolyte
metabolism; Trace elements; Energy metabolism; Carbohydrate metabolism;
Nitrogen metabolism; Lipid metabolism; Nucleic acid metabolism; Vitamins;
Pharmacology and toxicology, Part I. Specific organ studies includes:
Connective tissue; Bone; Skin; Skeletal muscle; Heart;
Circulation; Hematopoietic system; Respiratory organs; Gastro-intestinal
tract; Pancreas and salivary glands; Liver diseases; Endocrine glands;
Nervous system; Male genital organs; Kidneys; Female genital organs;

Appendix including an index of chemicals, buffer solutions, standard and
control solutions, test reagents, t-values for the "Student" t test,
transmission and extinction values, normograms for determination of body
surface area Subject index. ABSTRACT AUTHORS: J. G. Scully

L10 ANSWER 26 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 1939:12547 BIOSIS
DN PREV19391300012643; BA13:12643
TI Proceedings of the American Physiological Society. Fifty-first annual
meeting.
AU ABRAMSON, DAVID I.; ZAZEELA, HERMAN; OPPENHEIMER, B. S.; Et al.
SO AMER JOUR PHYSIOL, (1939) Vol. 126, No. 3, pp. 417-660.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB Effect of smoking upon the vascular beds in skin and muscle, as determined
by plethysmographic studies in man, by DAVID I. ABRAMSON, HERMAN ZAZEELA,
and B. S. OPPENHEIMER; Protein intake and protein distribution in the
organs and tissues of the body, by T. ADDIS; The signs of acute anoxia in
man, by FREDERICK A. D. ALEXANDER, and H. E. HIMWICH; Signs of
progressive acute Anoxia in man, by F. A. D. ALEXANDER, BASILE LIPETZ,
and H. E. HIMWICH; Effects of amorphous, crystalline zinc and protamine
zinc insulin in animals, by FREDERICK M. ALLEN; Studies on the central
olfactory system based on the effects of brain lesions on conditioned
reflexes in dogs, by WILLIAM F. ALLEN; Comparative actions of optically
isomeric phenisopropyl-amines, by GORDON A. ALLES; Endocrine factors in
intestinal absorption, by T. L. ALTHAUSEN, M. STOCKHOLM, and E. M.
ANDERSON; Behavior of the sow in relation to the sex cycle, by MARGARET
ALTMANN; Urinary excretion of radioactive sodium and potassium in
adrenalectomized rats with and without salt, by EVELYN ANDERSON, and

MICHAEL JOSEPH; Two cases of experimental neurosis in dogs of known genetic constitution, by O. D. ANDERSON; The spontaneous neuro-muscular activity of various pure breeds of dog and of interbreed hybrids of the first and second generation, by O. D. ANDERSON; Gastric secretion in extragastric malignancy, by MAX APPEL, and H. NECHELES; The effect of sodium azide on the frequency of the embryonic fish heart, by C. W. J. ARMSTRONG, and KENNETH C. FISHER; Time relations in the cyclic release of ovarian hormones in the rat, by E. B. ASTWOOD; Splenic rhythm in relation to blood flow, by E. J. BALDES, J. H. GRINDLAY, and J. F. HERRICK; Relation of anterior and posterior hypo-thalamic nuclei to anhydremic responses to cold in monkeys, by HENRY G. BARBOUR; Analysis of iodoacetic acid effect on metabolism of isolated mammalian tissues, by S. B. BARKER, and E. SHORR; Observations on the adreno-genital-genital syndrome, by BRODA O. BARNES; A study of the effect of adrenalectomy and iodoacetic acid poisoning on the intestinal absorption of spectroscopically active fats, by RICHARD H. BARNES, ELMER S. MILLER, and G. O. BURR; Degeneration of the spino-cerebellar tracts in a leopard, by S. E. BARRERA, and F. H. PIKE; Effects of lesions at various levels of spino-cortical sensory system in the macacus rhesus, by S. E. BARRERA, and A. FERRARO; Monkeys with lesions of the sensory system at various levels (dorsal columns, dorsal column nuclei and post-central convolutions), by S. E. BARRERA, and A. FERRARO; The blood sugar level of the fasting domestic fowl, by H. T. BATT; Proof of fetal swallowing, gastrointestinal peristalsis and defecation in amnio, by R. F. BECKER, M. D. SCHULZ, and W. F. WINDLE; Autonomic responses in monkey and cat, by M. B. BENDER; Dietary bradycardia and sensitivity to ouabain in the dog, by A. L. BENNETT, J. C. BURKE, and A. R.

McINTYRE; The error of estimate of the blood cell count as made with the
hemocytometer, by JOSEPH NERKSON, T. B. MAGATH, and MARGARET HURN; The
elimination in the bile of orally administered bile acids, by A. L.
BERMAN, E. SNAPP, and A. C. IVY; The efferent pathway of chemoroflex
vasomotor reactions of carotid body origin, by THEODORE BERNTHAL, and
HARRY E. MOTLEY; The determination of the excretion of beta
phenylisopropylamine (benzedrine) by man, by KARL H. BEYER, and J. T.
SKINNER; Oxygen consumption and blood flow in perfused organs, by RICHARD
J. BING; B and C nerve fibers, by G. H. BISHOP, and JAMES L. O'LEARY;
Oxygen transport by the blood of certain freshwater fish, by EDGAR C.
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R. C. De B0D0, J. E. SWEET, A. E. BENAGLIA, and H. I. BLOCH;
Gluconeogenesis in fasted hypophysectomized dogs, by R. C. De BODO, J.
E. SWEET, A. E. BENAGLIA, and H. I. BLOCH; Liberation by light of a
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BOERNSTEIN; Effects of oxygen at high barometric pressure on some
mammalian smooth muscle, by DAVID F. BOHR, and JOHN W. BEAN;
Experimental acute yellow atrophy of the liver, by W. N. B0LDYREFF, and
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growth of Chilomonas paramecium, by WILLIAM J. BOWEN; Studies on vagal
inhibition of inspiration, by T. E. BOYD, and C. A. MAASKE; Effects of
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Masculinization of the female rat by gonadotropic extracts, by JAMES T.

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changes in arterial blood during chorda tympani stimulation and during
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hunger motility in the dog, by B. E. BRUSH, and T. L. PATTERSON;
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W. E. BURGE; Demonstration of electrical polarity in the fish and in the
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influence of upper urinary tract distention on gastric hunger motility in
the dog, by K. N. CAMPBELL, and T. L. PATTERSON; The effect of
jaundiced serum upon the pH sphatase activity of normal serum, by A.
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permeability of the guinea-pig placenta to the foreign protein ricin, by
EMMETT B. CARMICHAEL, and LOUIS C. POSEY; Human direct and indirect
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pro-pionate, by HUBERT R. CATCHPOLE, and JAMES B. HAMILTON; Carbohydrate
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CHAMBERS. J. E. SWEET, J. P. CHANDLER, and A. L. LICHTMAN; Visual
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and cardio-vascular response to repeated occlusions of the head arteries
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dogs, by RUTH CORTELL, and J. M. ROGOFF; The effect of temperature on
the electrical responses from the eyes of the grasshopper and moth, by
FREDERICK CRESCITELLI, and THEODORE L. JAHN; Differential effects of
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of fertility in male rats by prophylactic administration of alpha
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EMERSON; The sequence of onset of injury potentials on the surface of the
dog and turtle ventricle, by J. A. E. EYSTER, WALTER J. MEEK, HAROLD
GOLDBERG, and H. L. BARTSCH; The liver in relation to movements of
potassium, by WALLACE O. FENN; The control of uterine motility in the
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placing stimuli or lesions in the brain, by J. K. W. FERGUSON; The role
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faradic and galvanic stimulation upon atrophying skeletal muscle, by ERNST
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KENNETH C. FISHER; Spinal reflexes in nicotin poisoning, by F. E.
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pressure and heart rate of the normal and hypertensive dog. by L.
FRIEDBERG, and L. N. KATZ; Induction of estrous behavior in anestrous
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conditioned and unconditioned reflex: the factor of state of the organism
at the time of stimulation and of prolonged experimental repetitions, by
W. HORSLEY GANTT; The effect of stimulation on the fat and carbohydrate
content of the gastrocnemius muscle in the phlorizin-ized rat, by CHALMERS
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light on the response of the capon comb to directly applied androgen, by
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insufficiency, by CHARLES A. WINTER, W. R. INGRAM, and E. G. GROSS;
Studies in pain sensation. II. The quantitative analysis of the action
of analgesics, by H. G. WOLFF, J. D. HARDY, and H. GOODELL; Potassium
exchanges between mammalian muscle and blood in relation to activity, by
E. H. WOOD, D. A. COLLINS, and G. K. MOE; The proprio-ceptive drive
of the respiratory act, by JOSEPH J. WORZNIAK, and ROBERT GESELL; Maximum
blood flow in the human lower extremity, by GEORGE W WRIGHT, and KENTON
PHELPS; Relation of various groups of the adrenalin molecule to its smooth
muscle inhibiting function, by W. B. YOUMANS, and K. AUMANN; and
Nucleoproteins from streptococcus pyo-genes: some chemical and serological
properties and changes in both caused by certain enzymes, by CHARLES A.
ZITTLE.

L10 ANSWER 27 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 1939:14437 BIOSIS

DN PREV19391300014545; BA13:14545
TI The comparative toxicity of fluorine in calcium fluoride and in cryolite.
AU LAWRENZ, MARGARET; MITCHELL, H. H.; RUTH, W. A.
SO JOUR NUTRITION, (1939) Vol. 18, No. 2, pp. 115-125.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB 12 pairs of growing rats were fed (paired-feeding) on a complete diet
containing 3.04 p.p.m. of fluorine. The F supplements (Ca fluoride and
cryolite) were fed in the drinking water in doses providing
equal amounts of fluorine to pair mates; average for the entire experiment, 0.58
mg. of F per kg. of body weight daily. After 14 wks. of feeding, during
which weekly examinations were made of the teeth, the rats were
sacrificed, the carcasses dissected into bone, teeth and soft
tissue samples and the 72 samples thus obtained were analyzed
separately for F. No distinct effects between the F supplements
tested were observed upon growth, food consumption, the time of appearance
of tooth striations, nor the conc, of F in bones, teeth or soft tissues.
At the levels fed, the F in CaF2 and in cryolite (synthetic) seemed to be
equally toxic and equally assimilable. During the exptl. feeding period,
approximately 59% of the ingested F was retained in the bodies of the
growing rats. About 96% of the F retained (at an intake equivalent to 13
p.p.m. of food consumed) was deposited in the skeleton, and the remaining
4% was about equally divided between teeth :and soft tissues.
ABSTRACT AUTHORS: Auth. (courtesy Wistar Bibl. Serv.)

L10 ANSWER 28 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN
AN 1936:6959 BIOSIS
DN PREV193610000006974; BA10:6974
TI Das Wachstum des Selachier-wirbels und seiner Gewebe.
AU WURMBACH, H.
SO ZOOL JAHRB ABT ANAT U ONTOG TIERE, (1932) Vol. 55, No. 1, pp. 1-136.
DT Article
FS BA
LA Unavailable

ED Entered STN: May 2007
Last Updated on STN: May 2007
AB Development of the vertebra was studied in Acanthias vulgaris, Raja sp.,
Galeus canis, Scyllium canicula, and Pristiurus m,elanostomus. The
notochord is surrounded by an int. elastic membrane, layer of collagenous
fibers, and an extract elastic membrane. The sclerotome is composed of
syncytial reticulum in which cartilage formation begins by the appearance
of cell walls between the nuclei in 4 places next the elastica extract: the 2
basidorsals in the angles between notochord and spinal cord and the 2
basiventrals around the caudal blood-vessels. Cells also invade the
elastica extract and part of the fibrous sheath of the notochord. Cart.
formation spreads in the 4 arches and in Acanthias the basidorsals and
basiventrals fuse above and below respectively, while in Pristiurus,
Scyllium, and Galeus, they remain separate. In early cartilage
formation there is much cell division but with increasing age, divisions
decline and growth occurs chiefly by intussuception in which the cart.
cells increase 350 times in volume The basidorsals, basiventrals, and
inter-caiaries of Acanthias, and the vent. arches of the others continue
to grow by intussuception to a late age but this type of growth is
gradually limited by the calcification of both outer and inner surfaces of
the cartilages to form the tesserae. The tesserae consist of thin
calcareous plates and increase in thickness by deposition of more Ca salts
in the cartilage. After the appearance of the tesserae, the vertebral
cartilages continue to grow, slightly in most cases, by renewed cart.
formation along the conn. tissue boundaries between the cartilages and
under the perichondrium, and this serves in most cases chiefly to attach
the cartilages firmly to the conn. tissue. It is of importance, however,
in the dors. cartilages of Galeus, Pristiurus, and Scyllium where there is

much renewed cart. formation in the conn. tissue and under the perichondrium, resulting in calcified cartilage resembling bone in some places. By the inwandering of cells, the chorda sheath becomes divided into an acellular collagenous layer, and an outer cellular fibrous sheath which grows by formation of new fibers and intercellular substance. This cellular sheath becomes divided into inner and outer zones of chondromucoid by a middle zone which remains fibrous. This middle zone soon calcifies while the outer and inner zones increase in thickness by intussuception. The calcified ring prevents further intussuception and exerts a radial tension upon the outer and inner zones which causes the appearance in them of radial collagenous fibers . The inner zone squeezes the notochord at each vertebra. Upon the outer surface of the outer zone tesserae arise and these permit further growth only in a diagonal direction. The basidorsals and basiventrals fuse with the cartilage of the outer zone, thus forming the vert. centrum, and the 4 intermedialia arise in the remains of the skeletogenous tissue outside the elastica extract between the basidorsals and basiventrals. In Acanthias these intermedials consist of hyaline cartilage with some calcified lamellae, while in Galeus they soon calcify and show annual calcareous rings. The intervert. ring in the chorda sheath continues to grow mostly by formation of collagenous fibers throughout life and remains therefore in a somewhat embryonic condition. The calcified ring of the middle zone of the chorda sheath does not extend into the intervert. tissue which is thus continuous with the outer zone. The latter lengthens, and so accomplishes elongation of the vert. column by continually encroaching on the growing intervert. region. Elongation ceases when the calcified. middle zone meets and fuses with the longitudinal calcified lamellae which are laid down in the outer zone. The median zone gradually becomes curved

with concave surface facing the outer zone. In Galeus calcareous lamellae
radiate diagonally from an intercalary growth zone. Through the curvature
of the calcified middle zone the centrum takes on the characteristic
hour-glass shape and grow.-: at its ends both in length and thickness.
The chorda increases both by cell multiplication and by intussuception of
the inner cells which become vacuo-lated. At first it grows everywhere
but growth becomes limited to the intervert. region by the pressure upon
it of the inner zone of the vertebrae. The intervert. region remains
continuous with the perichondrium and the conn. tissue between the arch
cartilages, in this way assuring further growth. The breaks in the
elastica extract spread permitting union of the arches and centrum and the
membrane remains as an elastic net in the peri-condrium and conn. tissue.
The elastica int. and acellular fibrous layer of the chorda sheath stretch
with the growth of the chorda but do not thicken. There is a long
discussion of the correlation of morphological and physiological stages in
the development of the vertebrae. During the sclerotome and hyaline
cartilage stages there is imbibition of water and growth by
intussuception. This is followed by the formation of collagenous and
calcified tissue. ABSTRACT AUTHORS: L. H. Hyman

L10 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1907:2442 CAPLUS
DN 1:2442
OREF 1:622c-h
TI Absorptive Properties of Various Charcoals
AU Rosenthaler, L.; Turk, F.
CS Pharm. Inst. Univ. Strassburg
SO Archiv der Pharmazie (Weinheim, Germany) (1907), 244, 517-36
CODEN: ARPMAS; ISSN: 0365-6233
DT Journal
LA Unavailable
AB The experiments were conducted under varying conditions as to temperature,
time, concentration, and kind of solvents used. Substances used were,

codine, caffeine, salicin, picrotoxin, gallic acid, tannic acid, oxalic acid, potassium oxalate, indigo and glucose; also the separation of caffeine from tea, coffee and guarana. From their results, the authors draw the following conclusions: That the charcoals may be divided into two groups, according to their absorbent powers; 1, bone, flesh, and "vegetable blood" charcoals; 2, blood, linden and sponge charcoals. The absorption for the same coal depends upon the solvent used. The greatest absorption occurs with solvents in the following order: Water, alcohol, methyl alcohol, acetic ether, acetone and chloroform. Relatively less absorption takes place from concentrated than from dilute solutions. The decolorizing power of charcoal depends upon its power of absorption. The charcoal should be purified by washing with the solvent to be used, or by boiling with acid and washing. It is sufficient to leave the substance in contact with the charcoal at ordinary temperature. Animal charcoal has a powerful oxidizing action and should not be used for substances easily oxidized. For the quantitative determination of such substances as sugar in wines and other liquids, charcoal should not be used unless it has been previously shown that the substance to be estimated is not absorbed under similar conditions. L.
Rosenthaler adds to the preceding some experiments upon the absorption of resorcinol, hydroquinol, acetanilide and cholesterol by charcoal, and concludes that the ratio of absorption is in proportion to the molecular weight. Hence it is not advisable to decolorize a substance with charcoal when the molecular weight of the substance is greater than that of the color present.

L10 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:144501 CAPLUS
DN 0:144501
TI New reactions and derivatives of the glucuronic acid: Report VII. - About Glucuronic Acid. [machine translation]
AU Neuberg, Carl; Neimann, Wilhelm

CS Berlin. Chem. Lab. d. Pathol. Inst. d. Univ.
SO Zeitschrift fuer Physiologische Chemie (1905), 44, 97-113
From: Chem. Zentr., 1905, I, 1084-1086
CODEN: ZPCHA5
DT Journal
LA Unavailable
AB [Machine Translation of Descriptors]. Similarly, the kinds of sugar also
the glucuronic acid by alkalis relocates by separating the
developing products in satisfactory way. The effect of CaO defined
substances will produce the analogous Saccharinum bearing of grape sugar
as by-product. Saccharonic acid supplies the develops lactic acid and
glyceric acid. It is identical to the oxidation product produced from
KILIANI from saccharin. COOH-(CH·OH)2-C(CH3)·OH-COOH. By
accumulation of hydrocyanic acid, the glucuronic acid Pentaoxypimelinic
acid, COOH-(CH·OH)5-COOH supplies identically to the KILIANI by
oxidation α-Glucose carbonic acid and E. FISCHER by oxidation
α of produced Glucoheptose. The addition of HCN is done via effect
of KCN on glucuronic acid free HCN and glucuronic acid which does not
react on the other, like free Glucosamine free HCN which does not bind
(NEUBERG and WOLFF, Ber. Dtsch. Chemical Ges. vo. 35, pg. 4018; C. vo. 1903,
I. pg. 390). After investigations of SCHOORL (Rec. trav. chim. Pays- Bas
vo. 22, pg. 31; C. vo. 1903, I. pg. 1081) urea reacts with aldoses under
exit of 1 mole of water. Equimolecular quantities of carbamide
and glucuronic acid are connected in 5% H2SO4 of containing solution to a
urea glucuronic acid, NH2·CO·N:CH(CH·OH)4-COOH, which
can be separated by easily soluble barium salt precipitable by
alcohol from insoluble basic Barium glucuronate and BaSO4. It is laevogyr
like "paired glucuronic acid" and disintegrates by effect of boiling
mineral acid into the components of the free acid suffers in decay when
standing the aqueous solution. It is very probable that urea glucuronic
acid in certain urines are anti-clockwise dextrogyr becomes very easy and
no increased content of phenol or indoxyl. Compounds of the glucuronic
acid with phenyl hydrazine are always apart from GIEMSA's phenyl hydrazone

not in the pure known mixtures of the numerously possible connecting forms of hydrazide, osazone, Hydrazohydrazide, Osazone hydrazide etc. develop, (see original for graphics). By a small trick, it can produce Glucuronic acid osazone purely by effect of 3 mole of acetic acid phenyl hydrazine on 1 mole of Glucuronic acid with 40° during 1-3 days. The composition has similarity to the Glucosazone for confounding with melting point of 200-205°. Heats up the pure Glucuronic acid osazone in the pipe with 1.2 mole of Phenyl hydrazine and the twenty way quantity alcohol in 2 hours on 150°, then the Osazone hydrazide of the glucuronic acid of the melting point 212° develops in the composition, (see original for graphics). Both hydrazine compounds does not have any meaning for the isolation of the glucuronic acid from impure solutions. Effect of lime on glucuronic acid. 50 g of glucuronic acid, 30 g CaO and 300 ccm water is kept in 3 months with room temperature and 1 month with 40°. No longer reducing solution was treated with CO2 in the boiling heat and according to the filtration with lead acetate (precipitation I), lead acetic (precipitation II) and leadsub acetate + NH3 (precipitation III) precipitated, (see original for graphics). All three precipitations were treated into aqueous suspension with H2S. With the concentrating precipitation supplied Nd. I, 2 g Saccharon, C6H8O6 + H2O and the anhydride of the Saccharonic acid.

Precipitation II did not result in a defined product, and III supplied anti-clockwise glyceric acid whose barium salt is dextrogyr about the cuprous salt, (see original document for graphics). Effect of potassium cyanide on glucuronic acid. 26 g of Glucuronic acid lactone, 8 g of KCN and 100 ccm water were let stand to the disappearance of the reduction ability (10-14 days) at usual temperature. The high viscosity reaction mixture was lively warmed up with glacial acetic acid acidified to the expulsion of the excess HCN and to the saponification of the formed amide with respect to nitrile, then with NH3 neutralized and with lead

acetic precipitated. The light yellow lead salt was filtered off, washed
and divided with H2S. From heating with CaCO3, it resulted to the lime salt which crystallizes with bone charcoal decolorized solution. The derivative is optically inactive
α-Glucopentaoxypimelinic acid. Effect of urea on glucuronic acid.
7.5 g of Glucuronic acid eanhydrid, 2.5 g urea and 40 ccm H2SO4 from 5%
with 40° is kept. The clockwise rotation decreases without disappearing completely and it becomes constant after 2 1/2-monthly
standing. Since it cannot be removed in reaction stepped of glucuronic
acid by anaerobic digestion, the subsequent method serves for the isolation of the Ureidoglucuronic acid. The liquid is shifted in the cold
with saturated baryta water and boiled up fast, thus the insoluble basic Barium glucuronate precipitated beside BaSO4. The
filtrate is cooled immediately by ice and released with CO2 from the
barite and restricted in the vacuum with alcohol precipitated. If the
precipitation reduces FEHLING solution, then with the concentrating
glucuronic acid splitting are made. From repeated dissolving in water and cases by means of alcohol of pure barium salt of the Ureidoglucuronic acid results, [NH2·CO·N:CH(CH·OH)4-
COO] 2Ba = C14H22014N4Ba. White, steady precipitation is reduced after
3-4-minutes heating. [α]D = -15.83° (l = 1, C = 8.84,
α = -1° 24'). Enzymes, like emulsin, Kefir lactase or yeast maltase are not contested. With exact precipitation of the barium by
means of H2SO4, an anti-clockwise solution of the free urea glucuronic
acid develops ([α] D = about -21°) which becomes strongly reducing and dextrogyr, as decay occurs in the components. By conversion
of leadsub acetate, NH3 is obtain from the ureidoglucuronic acid barium
with no other crystallized salt. The urea is not provable in the Urea
glucuronic acid neither with HNO3 nor oxalic acid. Effect of phenyl
hydrazine on glucuronic acid. a) A solution is dissolved from 3.5 g of
Glucuronic acid lactone in 100 ccm water and 6.6 g phenyl hydrazine in the theoretical quantity of acetic acid from 30% in the
incubator with 40° in the closed container, then the mixture colors

of light yellow begins the elimination of felted needles after 3 days, the
container as thick mash fulfills. The substance has the composition
C18H20O5N4 with melting point 200-202° is few soluble in
water, benzene, insoluble in ethers, easily soluble in acetone and
very easily soluble in pyridine. The osazone turns in the Pyridine
alcohol mixture left. Gives with baryte hydrate and lead acetic
precipitations due to formation of salts at the carboxyl group. b) When
warming up Glucuronic acid osazone with 1.2 mole of Phenyl hydrazine and
the twenty way quantity alcohol in the pipe on 150°, it produces
the few soluble Osazone hydrazide, C24H26O4N6. Discolors with 210°
and melts with 212° under lively gas coil. In all solvents, it is
few soluble except in pyridine and anti-clockwise in the Pyridine alcohol
mixture. The compound could not be kept pure by direct heating up of
glucuronic acid, alcohol and phenyl hydrazine in the pipe.

L10 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:215657 CAPLUS
DN 0:215657
TI The trade with benzenes, their composition, investigation and utilization.
[machine translation]
AU Frank, Fritz
SO Chem. Ind. (1901), 24, 262-66
From: Chem. Zentr., 1901, I, 1251-1253
DT Journal
LA Unavailable
AB [Machine Translation of Descriptors]. (Conclusion of page 1125). The
middle vapor density of the commercial products (see original document for
table), can hardly be used only for the evaluation of the degree of the
purity of the products, but for the recognition of their composition.
Determination of the CS2. Instead of the very recommendable, but in
practice not in-patriated method of LIEBERMANN and SEYEWETZ (Ber. Dtsch.
Chemical Ges. 24. 788) is generally the subsequent titrimetric sample used,
those on the formation of xanthogenic acid potassium and shifting of the

same in water insoluble. Copper xanthogenate is based on: One mixes 50 g of the benzols concerned with 50 g of a solution of 11 g KOH in 90 g 100% alcohol, adds about 100 ccm water after standing lasting several hours in addition, vibrated several times through, separates the aqueous lye from the benzene and washes the latter still several times with water. The aqueous liquids are combined, and the formed potassium xanthogenate in the solution or aliquots of parts of the same after the neutralization with acetic acid so long with a copper solution - the same contains 12.475 g of crystallized CuSO4 in the liter, and 1 ccm the same corresponds to 0.0076 g CS2 - shifted, until with the glass rod of taken out drops, brought on filter paper, with a drop brought beside it ferrous cyanogen potassium solution lets develop a rod coloring at the point of contact. The termination point of the reaction recognizes already by that developed in the beginning finely distributed precipitation of copper xanthogenate together-clumps, 90's and 50's benzene contained on the average 0.2-1%, and 0.0 to 0.5% CS2, the higher benzenes no CS2, the benzene advances more than 5% CS2. With the examination of the latter one must increase the indicated quantity alcoholic KOH, respectable those of the benzols make smaller. Author warns CS2-released of benzenes from the foreign country of the purchase allegedly. Thus as particularly purely praised "Carburierbenzol" from England a still 0.608% CS2 and contained a bromine consumption of 4.16%. To the qualitative proof of tiophene in benzene one pours some cubic centimeters of pure H2SO4 into a flat, before porcelain dish rinsed out with pure H2SO4 onto a granule isatine, laminates over it the benzene and covers the bowl with watch glass. With pure benzene no blue rings may form around the isatine within one hour. Concerning the volumetric determination of the thiophene in the benzene see DEINIGES (Bulletin Society Chim., Paris [3] 15. 1064; C. 96. II. 852). The determination of paraffin hydrocarbon materials. As paraffins seizes

together not all sulfurate or not body destroyable by fuming H2SO4,
therefore also the Naphtene and the CS2, which determine directly can
removed the sum. For the quantitative determination of the paraffins 200
g of the sample with 500 g 20% anhydride containing H2SO4, 15 minutes of a
long under avoidance of each heating up in the separating funnel
are shake and then of 2 hours serve calmly. After discharging the H2SO4
one repeats still twice shaking with new H2SO4 - generally speaking 1 1/2
kg H2SO4 is necessary for the dissolution of the hydrocarbon materials -
and let stand. One collects the floating oil for itself and lets the
H2SO4 on it same the weight quantity of small ice, which is in 3
liter-pistons, in slow current of under agitation, flow for its part,
without the temperature over 40°, and distilled rises over free
flame into submitted 100 ccm separating funnels directly. As
soon as except the oil distilling, first still 50 ccm water
changed over one recovered surely all mechanically dissolved paraffin.
After discharging water it combines it with the originally
collected oil and so often shakes it with 30 g each of above H2SO4, until
no more decrease in volume takes place. The weight of the oils washed
afterwards with small quantities distilled water gives,
divided by 2, the percents by weight at paraffin in the test.
90's-, 50's- and 0-% of benzenes contains hardly over 1, toluene nearly
none, xylene to 3% paraffin. Titration with bromine; medium pipette
brings, one to 5 ccm of the sample into a glass stopper with a volume of
approximately 50 ccm, adds 10 ccm diluted 20% H2SO4 in addition and lets
fast so much in addition-flow from a burette to 1/10 normal potassium
bromate-potassium bromide solution (= 9.9167 g KBr 2.7833 g KBrO3 in the
liter), then after, 5 minutes long continuous shaking of the sample. The
reaction is terminated, as soon as the floating oil is orange colored
after 15 minutes for long standing, and a drop of the same, on freshly
prepared, dampened iodine zinc strength paper dabbed, immediately gives

dark-blue coloring. Consumption of bromine - 1 ccm of the 1/10 normal solution corresponds to 0.008 g bromine - is to be indicated directly. It is effective to make and take from both following accurate experiments, medium only on a preliminary test. Pure benzene and toluene gives at 1/10 ccm clear bromine reaction to the bromine solution, to decolorize during 50's and 90's benzene about 0.6%, rarely over 1%. Determination for examination for the behavior against H_2SO_4, on the content to resinable, or unsaturated compounds, 5 ccm concentrated H_2SO_4, with 5 ccm of the sample in 15 ccm seizing preparation flask in 5 min. long strongly through-shake, obtained after 1-2 minutes long standing with a solution of potassium dichromate in 50% pure H_2SO_4 compared, which, in same quantity and in a same bottle, as the H_2SO_4 of the sample is over-laminated and present, for their part with 5 ccm purest benzene 50's, 90's and technical benzene shows the color of a solution from 0.5 to at the most 2.5 g, xylene from 1.0-2.0 g $K_2Cr_2O_7$ in 1 liter the 50% H_2SO_4; with pure benzol and toluene remain colorless the H_2SO_4. The color tone of the type solutions holds itself longer time, the over layering with pure benzol is to be made against it each time again. The test by smell is possible still with 90's the benzene and with the solvent naphta from time to time.

With first it is sufficient to pour and evaporate little on filter paper:

The residue is not to possess a sharp or stinging smell. Of to 160°; boiling solvent naphta 20 ccm in the dished plate is let evaporate when gentle heating up: The residue free of sharp smell may not be only resinous tan and colored. The inflammation point of the benzenes (see original document for table) are determined in ABEL's apparatus: 90% Benzene, 50% Benzene, 0% Benzene, bis pigment 160°; boiling solution benzene, to pigment 175°; boiling solution benzene; Density..., 0.880-0.883, 0.875-0.877, 0.870-0.872, 0.874-0.880, 0.890-0.910; Inflammation point, under -4°,-, -, +21°,

+28°; Commercial heavy benzene, pure benzene, toluene, xylene; Density ..., 0.920-0.945, 0.883-0.885, 0.870-0.871, 0.867-0.869; Inflammation point..., +47°,-8°, +5°, +21°.

Quantitative determination of the individual benzene-homologous in the commercial products. The same is done via fractionation of 1 kg of the benzols concerned from an alembic, still copper similarly like the determination boiling point (previously cited). Normal commercial benzene give thereby on the average subsequent numbers in per cent: (see original document for table). As fractions caught with 1. and 2. to 79°; as advance, then 79-85°, 85-105°, 105-115°, with 3. to 79°; advance and 79-81°, with 4. to 109°; advance and 109-110.5°, as well as with the xylene to 135°; advance, 135-137°; (p-compound), 137-140°; (m-compound) and 140-145°; (o-compound). The use of the benzene and its homologs. The benzenes are used mainly in the dye industry, as well as furthermore to the carburation of the illuminating gas. For period of one year so-called "technical benzene" looks for, density 0.882 to 0.884 containing 95% benzene and 5% toluene to displace with success, the gasoline so with the operation of engine of all type, furthermore in mixtures with white spirits with lighting systems, particularly however with the extraction of bone fat and seed cake, even if during the seed defatting by means of benzene still some technical grievances are to be overcome. In the lacquer production found to solvents, the technical benzene both and like also and addition to spirit varnishes, like above all as turpentine oil replacement entrance. Also in the rubber industry still too little lets itself replace the experiences of English factories of the CS2 considered by benzene after in Germany.

L10 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:209396 CAPLUS
DN 0:209396
TI On Pyridine carbonic acids. [machine translation]
AU Pinner, A.
CS Berlin

SO Berichte der Deutschen Chemischen Gesellschaft (1900), 33, 1225-30
From: Chem. Zentr., 1900, I, 1225-1226
CODEN: BDCGAS; ISSN: 0365-9496
DT Journal
LA Unavailable
AB [Machine Translation of Descriptors]. From raw material to prepare the
Pyridine carbonic acid with 12 tests served from Pyridine bases, which
were extracted from coal tar with 150 g each, and whose main boiling
points lay between 128° and 148°. The oxidation of the oil
happened after the subsequent procedure, which deviates from WEIDEL for
the bases of some bone-oil prepared. 150 g base were cooked
into a boiling solution by 540 g KMnO4 in 13 liters water that
is slowly registered and up to the decoloration; the liquid filtered off
by the manganese dioxide mineral was released by distillation from
unaffected bases, restricted with sulfuric acid which is not completely
neutralized, and on 300 to 400 ccm evaporated now exactly neutralized,
until a substantial part of the K-sulfate over crystallized. By
interference of the poured off solution with the triple quantity alcohol
the remainder of the salt was removed and the filtrate to dry ones
evaporated on that. On the average of 210 g of K-salts behind-remained,
those in the 1 1/2 doubly folding quantity of water dissolved
and at 70° with copper acetate became fractional precipitated.
Here, picolinic acid separates copper in violet, in hot
water is very easily soluble. Lamella first off, during the salts
β and γ -Pyridine carbonic acid, in blue or green-blue, short,
thick, also prisms completely insoluble into boiling water
precipitate, mixed with the salt α -Methylpyridine-α -carbonic
acid, into later precipitate accumulated, and α, α' of
pyridine dicarbonic acid copper in solution remains. The cuprous salts
are suspended into boiling water and divided by H2S;
with the vaporization of the filtrates, it is to be considered that the
Pyridine carbonic acids with steam somewhat be volatile. The picolinic
acid, C5H4N (COOH) a, from benzene in transparent, glossy, hard crystals,
one keeps pure. β and γ of carbonic acid (nicotinic acid and
isonicotinic acid) is separated by alcohol, in which the latter

is insoluble. In alcoholic mother liquors remains α
-Methylpyridine-α'-.carbonic acid, CH3. C5H3N. COOH, which is
also
easily soluble in water, but crystallized well from benzene (see
the subsequent references). To the separation α,
α-Pyridine dicarbonic acid, C5H3N (COOH) 2, is suitable best the
salt C7H4NO4K, C7H5NO4 + 3H2O, which precipitates into little
soluble
glossy needles, if one the neutral potassium salt in the triple
quantity
cold water is soluble and half of its added weight concentrated
hydrochloric acid. Concerning the quantitative proportions of
the
individual base in the used material, it resulted that the
fraction
128-134° generally α -Picoline and therefore in preparation
of the picolinic acid suitably contains, during the fraction of
137 to
142° about quantities resemble β and γ -Picolin and very
much α -α' Dimethylpyridine, beside only few α -Picoline
exhibits, and for the production of Nicothic acid and
isonicotinic acid
that is useful. The Esterified acid succeeds to the same by
introducing
HCl into boiling alcoholic solution, until the chlorine hydrates
precipitating up first again gel. The esters are rather easily,
more
saponifiable, for example by potassium carbonates; with acetic
ester, they
condensed in the presence from the well-ethylate to
Pyridoylacetic ester,
their sodium salts, C6H4N. C (ONa): CH. C2C2H5, in water and is
called, in alcohol is easily soluble and on addition of acetic
acid to the
free esters as oil does not separate also in the vacuum not
undecomposed, and be more distillable. The chlorine hydrates of
the
esters are much more easily decomposing, than the metal salts.
By
conversion of the latter with ethyl bromide, the author hoped,
bromine-ethyl derivative of the formula C6H4N. CH (CO2C2H) .
CH2. CH2.
Br,extracted and from these after LIPP (LIEBIG's Ann. 289. 173;
C. 96. I.
369) to be able to represent Pyrroline derivatives, to the
nicotine
synthesis, will be important; so far however, during the effect
of ethyl
bromide, only very unpleasant products were received.

L10 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:263262 CAPLUS

DN 0:263262
TI Comparative investigation of Perphosphates of different origin. [machine
translation]
AU Sestini, F.
CS Pisa
SO L'Orosi (1897), 19, 289-91
From: Chem. Zentr., 1897, I, 195
DT Journal
LA Unavailable
AB [Machine Translation of Descriptors]. (Provisional report) with the dry
distillation of Perphosphates from bones, author obtains water a
small quantity of oil, which possesses the characteristic smell of the
animal oil. This oil can be divided by methanol into raw
Pyrocoll and animal oil. Thus one obtains for example from 50 g each
from: Raw Pyrocoll, animal oil; 1. Perphosphate from degreased
bone . ., 0.478 g, 7.69 g; 2. Perphosphate from bones, degreased
and something from glue are released. . . . ., 0.360 g, 8.28 g; 3.
Perphosphate from bones, are degreased and well released from glue. . . .
., 0.231 g, 5.27 g. Also with the distillation of Perphosphate from
mineral phosphate develop black substances, which can be separated
by methanol into a soluble and an insoluble part, whereas bituminous
smell. Thus one obtains from 50 g: Unsoluble in methanol, soluble in
methanol; 4. Perphosphate of mineral origin. ., 0.036 g, 0.226 g. Author
wants to examine Perphosphate of unknown origin in this way, in order to
be able to pull from the quantities and the kind of the distillate of
conclusions on the origin of the products.

=> s bone (3a) particle
L11 852 BONE (3A) PARTICLE

=> s tissue (graft or genera?)
MISSING OPERATOR 'TISSUE (GRAFT'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s tissue (3a) (graft or genera?)
L12 24019 TISSUE (3A) (GRAFT OR GENERA?)

```
=> s l11 and l12
L13          4 L11 AND L12

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14           3 DUP REM L13 (1 DUPLICATE REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L14  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2009 ACS on STN
AN   2007:1213040  CAPLUS
DN   147:455683
TI   Bone graft composition containing acellular tissue and
     demineralized bone matrixes
IN   Connor, Jerome; Qiu, Qing-Qing
PA   USA
SO   U.S. Pat. Appl. Publ., 18pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.
DATE
     ----------------    ----   --------    --------------------
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PI   US 20070248575       A1    20071025    US 2006-407446
20060419
     AU 2007240510        A1    20071101    AU 2007-240510
20070417
     CA 2646487           A1    20071101    CA 2007-2646487
20070417
     WO 2007124302        A2    20071101    WO 2007-US66771
20070417
     WO 2007124302        A3    20081127
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
BZ, CA,
             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
FI, GB,
             GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM,
             KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
MG, MK,
             MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO,
             RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
HU, IE,
             IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,
TR, BF,
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BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
EP 2007196 A2 20081231 EP 2007-760765 20070417
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA, HR, MK, RS
PRAI US 2006-407446 A 20060419
WO 2007-US66771 W 20070417
AB A method of making a bone graft composition (BGC) comprises combining fragments
of an acellular tissue matrix (ATM) with fragments of demineralized bone
matrix (DBM) to create a mixture, wherein the fragments of ATM and the
fragments of DBM in the mixture are substantially hydrated and drying the
mixture to form a BGC where the BGC when hydrated is osteoinductive. Also
featured are methods of treatment using the bone graft composition and articles
of manufacture that include the bone graft composition

L14 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 1
AN 1999:313905 BIOSIS
DN PREV199900313905
TI Comparison of bioactive glass to demineralized freeze-dried bone allograft
in the treatment of intrabony defects around implants in the canine
mandible.
AU Hall, E. Ellen; Meffert, Roland M.; Hermann, Joachim S.; Mellonig, James
T.; Cochran, David L. [Reprint author]
CS Department of Periodontics, University of Texas Health Science Center,
7703 Floyd Curl Drive, San Antonio, TX, 78440, USA
SO Journal of Periodontology, (May, 1999) Vol. 70, No. 5, pp. 526-535. print.
CODEN: JOPRAJ. ISSN: 0022-3492.
DT Article
LA English
ED Entered STN: 17 Aug 1999
Last Updated on STN: 17 Aug 1999
AB Background: The purpose of this study was to evaluate and compare the

healing of different bone grafting materials adjacent to titanium plasma-sprayed (TPS) endosseous dental implants. Methods: Implant osteotomy sites were prepared and standardized 3-walled intrabony defects (3 mm X 5 mm X 5 mm) were created at the mesial of each implant site. Thirty-two TPS implants were placed in edentulous mandibular ridges of the 4 dogs. Periodontal dressings were placed in the defect sites so as to create a defect simulating bone loss around an implant. After 3 months, the periodontal dressing was removed, the defect sites debrided and evaluated for size, and intramarrow penetration performed. The graft materials tested were 1) canine demineralized freeze-dried bone allograft (cDFDBA); 2) bioactive glass granules of a broad size range 90 to 710 microns (BRG); and 3) bioactive glass granules of narrow size range 300 to 355 microns (NRG). One site on each side of the mandible was not filled and served as a control. Dogs were sacrificed 4 months after graft placement. Results: Histologically, differences in percent bone-to-implant contact in the defect area were observed between the treatment groups. cDFDBA>control=BRG=NRG with statistical significance found between cDFDBA and control (P = 0.0379), but no statistically significant difference between control or either bioactive glass material. When comparing percent bone height fill of the defect in the grafted area, cDFDBA (65.7%) was significantly better than the control (48.9%; P ltoreq 0.05) with no statistically significant difference between control, broad range bioactive glass (57.3%) and narrow range bioactive glass (56.6%). When total bone area was measured, the percentage of new bone in the grafted area was cDFDBA (42.1%), broad range glass (33.1%) and narrow range glass (22.6%) with significance found between cDFDBA and NRG (P = 0.0102). The content of residual graft particles in soft tissue was significant (P = 0.0304) between cDFDBA (1.4%) and NRG

(11.4%) with no significant difference between graft material for residual
particle content in bone tissue. Conclusions: The
results of this study indicate that percent bone-to-implant contact and
percent bone height fill in an intrabony defect around titanium
plasma-sprayed implants are statistically significantly higher with the
use of DFDBA when compared to bioactive glass material.

L14 ANSWER 3 OF 3 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1999:330834 BIOSIS
DN PREV199900330834
TI Synthetic bone grafts in peri-implant bone dehiscences: Histological
results in humans.
AU Passi, Piero [Reprint author]; Girardello, Giambattista; Piattelli,
Adriano; Scarano, Antonio
CS Via Zabarella, Padova, 64-35121, Italy
SO General Dentistry, (May-June, 1999) Vol. 47, No. 3, pp. 290-295. print.
ISSN: 0363-6771.
DT Article
LA English
ED Entered STN: 24 Aug 1999
Last Updated on STN: 24 Aug 1999
AB This study describes the histological results found in three patients
treated with osseointegrated implants and Bioplant HTR(R) (Hard
Tissue Replacement) synthetic bone graft in peri-implant
dehiscences adjacent to implants. This therapy was carried out without
the use of barrier membranes. Bioplant HTR(R) is reported to act as its
own barrier and prevent gingival soft tissue migration ingrowth. The
histologic picture demonstrated that Bioplant HTR(R) is osteoconductive
and biocompatible, and can be used both as bone substitute and as a
barrier for guided bone regeneration in implant therapy.

=> s bone (3a) graft
L15 23448 BONE (3A) GRAFT

=> s l15 and (medium or media)
L16 424 L15 AND (MEDIUM OR MEDIA)

=> s l16 and solidf?

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L17          0 L16 AND SOLIDF?

=> s l16 and solidif?
L18          0 L16 AND SOLIDIF?

=> s l16 and mill?
L19         12 L16 AND MILL?

=> dup rem l19
PROCESSING COMPLETED FOR L19
L20          10 DUP REM L19 (2 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L20  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2009 ACS on STN
AN   2008:72122  CAPLUS
DN   148:147707
TI   Production method for calcium phosphate nano-particles with high
purity
     and their use
IN   Brito Lopes, Jose Carlos; Gomes de Queiroz Dias, Madalena Maria;
Tenedorio
     Matos da Silva, Viviana Manuela; Quadros de Oliveira E Santos,
Paulo
     Alexandre; Mendes Monteiro, Fernando Jorge; Da Cunha Gomes,
Paulo Jorge;
     Pataquiva Mateus, Alis Yovana
PA   Fluidinova, Engenharia de Fluidos, S.A., Port.; Instituto
Nacional de
     Engenharia Biomedica
SO   PCT Int. Appl., 16pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.
DATE
     ---------------     ----   --------    --------------------
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PI   WO 2008007992        A2    20080117    WO 2007-PT31
20070716
     WO 2008007992        A3    20080403
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
BZ, CA,
              CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI,
              GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG,
              KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA,
MD, ME,
              MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG,
PH, PL,
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PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
CA 2635943 A1 20080117 CA 2007-2635943 20070716
EP 2041025 A2 20090401 EP 2007-793968 20070716
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA, HR, MK, RS
PRAI PT 2006-103528 A 20060714
WO 2007-PT31 W 20070716
AB Calcium phosphate nanoparticles are produced continuously in a network
mixer or static mixer reactor, fed by a calcium solution, a phosphate solution
and an alkaline solution and, optionally, one solvent or dispersing agent. The
propose process enables the micromixing control, which is essential to
form nanometric structures, but it is also a determining factor in the crystals
purity, crystallinity and morphol. The reactants distribution scheme at
the inlet of the reactor and along the reactor, performed continuously or
varying in time, is also a crucial factor to program the pH of the
reactant media along the reactor. The calcium phosphate
nanoparticles suspension that exits the reactor can be submitted to
further aging, ultrasonication, separation, drying, sintering and
milling. Preferably, hydroxyapatite is produced. Some calcium
phosphates are considered biomaterials, used as: food additives and
nutritional supplements; bone graft for bone
replacement, growth and repair; biocements and coating of metallic
implant. Some of the most recent applications include their use in
cosmetics, toothpaste and in esthetical treatments for diminishing

wrinkles by stimulating conjunctive tissue formation. The products can be
used as catalysts for water treatment or as absorbents in chromatog.
columns.

L20 ANSWER 2 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2008407507 EMBASE
TI In vitro degradation of poly-L-D-lactic acid (PLDLA) pellets and powder
used as synthetic alloplasts for bone grafting.
AU Coimbra, M.E.R.; Elias, C.N.
CS Department of Materials Science, Instituto Militar de Engenharia (IME),
Praca General Tiburcio, 80, Rio de Janeiro, RJ 22290-270, Brazil.
maria.coimbra@gmail.com
AU Coimbra, M.E.R.; Coelho, P.G.
CS Department of Biomaterial and Biomimetics, College of Dentistry, New York
University, 345 East 24th Street, New York, NY 10100, United States.
maria.coimbra@gmail.com
AU Coimbra, M. E. R. (correspondence)
CS Department of Materials Science, Instituto Militar de Engenharia (IME),
Praca General Tiburcio, 80, Rio de Janeiro, RJ 22290-270, Brazil.
maria.coimbra@gmail.com
SO Journal of Materials Science: Materials in Medicine, (October 2008) Vol.
19, No. 10, pp. 3227-3234.
Refs: 30
ISSN: 0957-4530 CODEN: JSMMEL
PB Kluwer Academic Publishers, Van Godewijckstraat 30, Dordrecht, 3311 GZ,
Netherlands.
CY Netherlands
DT Journal; Article
FS 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical and Experimental Biochemistry
LA English
SL English
ED Entered STN: 23 Sep 2008
Last Updated on STN: 23 Sep 2008
AB The objective of this study was to evaluate the in vitro degradation of
pellet and powder forms of a poly-l-d-lactic acid material used to produce
plates and screws for orthopedic, oral, and maxillofacial applications.

Materials and methods: In order to produce the powder form the as-received pellets were milled in a cryogenic chamber. Particles size distribution (PSD) histograms were developed for both forms. The materials were then characterized by Scanning Electron Microscopy (SEM), Differential Scanning Calorimetry (DSC), and Thermogravimetric Analysis (TGA) before and after immersion in simulated body fluid for 30, 60, and 90 days. Results: SEM showed that for both forms material degradation started after 30 days of immersion in SBF and evolved until 90 days. Degradation started at the amorphous zones of the polymer and exposed of deeper crystalline layers. The pellet and powder samples PSD showed polydispersed patterns with mean diameters of 673.98 μm and 259.55 μm. Thermal onset degradation temperatures were 365.64°C and 360.30°C, and of 363.49°C and 359.83°C before immersion and after 90 days in SBF for the pellet and powder forms, respectively. The Tg's of the pellets and the powder were approximately 61.5°C and 66°C, and their respective endothermic peaks were observed at approximately 125°C and 120°C. The specific heat (c) was approximately 8.5 J/g and 6.2 J/g for the pellet and powder material, respectively. Conclusion: According to the results obtained, cryogenic milling resulted in particle plastic deformation, and alterations in glass transition temperature, melting temperature, and specific heat of the material. .COPYRGT. 2008 Springer Science+Business Media, LLC.

L20 ANSWER 3 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2008143754 EMBASE

TI Immobilization of a bone and cartilage stimulating peptide to a synthetic bone graft.

AU Wang, Vivian; Misra, Gauri; Amsden, Brian (correspondence)

CS Department of Chemical Engineering, Queen's University, Kingston, ON K7L 3N6, Canada. brian.amsden@chee.queensu.ca

SO Journal of Materials Science: Materials in Medicine, (May 2008) Vol. 19,

No. 5, pp. 2145-2155.
Refs: 29
ISSN: 0957-4530 CODEN: JSMMEL
CY Netherlands
DT Journal; Article
FS 027 Biophysics, Bioengineering and Medical Instrumentation
LA English
SL English
ED Entered STN: 10 Apr 2008
Last Updated on STN: 10 Apr 2008
AB A synthetic peptide fragment of human collagen type I (BCSP®-1) was
linked to the surface of a commercially available ceramic in an effort to
improve the properties of the bone graft substitute to
accelerate local healing. BCSP®-1 was covalently immobilized on the
surface of the ceramic via the linkers 3-aminopropyl-triethoxysilane
(APTES) and suberic acid bis-N-hydroxysuccinimide ester (DSS). The chosen
chemistry was non-cytotoxic. A rat calvaria cell assay using alkaline
phosphatase (ALP) as an osteoblast differentiation marker, showed that
modifying the surface of the ceramic was enough to enhance ALP activity,
although the total cell population on the surface decreased. A
significant increase in ALP activity/cell was noted with serum albumin
bound to the surface, however, the BCSP®-1 bound surface exhibited an
even greater ALP activity that showed a surface concentration dependent
trend. An optimal BCSP®-1 surface density in the range of 0.87-2.24
nmol/cm(2) elicited the maximum ALP activity/cell at day 6 of culture.
The peptide bound ceramic generated an ALP activity/cell that was roughly
3-fold higher than the non-modified ceramic and 2-fold higher than the
APTES-grafted ceramic. .COPYRGT. 2007 Springer Science+Business Media, LLC.

L20 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN 2008:174964 CAPLUS
DN 148:399371
TI Genetic markers of osteogenesis and angiogenesis are altered in processed
lipoaspirate cells when cultured on three-dimensional scaffolds
AU Huang, Catherine K.; Huang, Weibiao; Zuk, Pat; Jarrahy, Reza; Rudkin,

George H.; Ishida, Kenji; Yamaguchi, Dean T.; Miller, Timothy A.
CS Division of Plastic and Reconstructive Surgery, David Geffen School of
Medicine at UCLA, Los Angeles, CA, 90095, USA
SO Plastic and Reconstructive Surgery (2008), 121(2), 411-423
CODEN: PRSUAS; ISSN: 0032-1052
PB Lippincott Williams & Wilkins
DT Journal
LA English
AB Background: Liposuction-derived stem cells (processed lipoaspirate) have
recently been shown to be capable of differentiating into bone. Most
studies on osteoblastic growth and differentiation have been conducted in
a conventional two-dimensional culture system; however, in native bone,
osteoblasts are situated in a three-dimensional configuration. There have
been limited studies of processed lipoaspirate behavior in
three-dimensional systems. The authors studied the influence a
three-dimensional scaffold has on the expression of genes related to
osteogenesis and angiogenesis in processed lipoaspirate cells. Methods:
One million processed lipoaspirate cells were seeded onto
two-dimensional poly(L-lactide-co-glycolide) films or in three-dimensional
poly(L-lactide-co-glycolide) scaffolds and incubated in osteogenic
medium up to 21 days. RNA was extracted and analyzed with quant.
real-time polymerase chain reaction. Results: When an inert
three-dimensional poly(L-lactide-co-glycolide) scaffold was introduced,
the pattern and sequence of gene expression changed significantly.
Processed lipoaspirate cells cultured onto three-dimensional scaffolds had
increased expression of interleukin-8 and vascular endothelial growth
factor compared with two-dimensional controls at early time points.
Osteogenesis markers - alkaline phosphatase, collagen type I, osteocalcin,
osteonectin, and osteopontin - were significantly up-regulated in
three-dimensional cultures relative to two-dimensional controls after 24 h
and persisted throughout the 21 days. Conclusions: In human processed
lipoaspirate cells, the introduction of a three-dimensional scaffold
significantly enhances gene markers of angiogenesis and osteogenesis. On

three-dimensional scaffolds, processed lipoaspirate cells first up-regulate genes involved with vascular ingrowth and then those involved in bone formation. We believe these differences will significantly impact the design of a bone graft substitute for clin. application.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 2
AN 2007:59339 CAPLUS
DN 146:115372
TI Mandibular reconstruction using a combination graft of rhBMP-2 with bone marrow cells expanded in vitro
AU Seto, Ichiro; Marukawa, Eriko; Asahina, Izumi
CS Tokyo, Japan
SO Plastic and Reconstructive Surgery (2006), 117(3), 902-908
CODEN: PRSUAS; ISSN: 0032-1052
PB Lippincott Williams & Wilkins
DT Journal
LA English
AB The aim of this study was to evaluate the efficacy of a combination graft, using recombinant human bone morphogenetic protein-2 (rhBMP-2) and culture-expanded cells derived from bone marrow, for bone regeneration in a nonhuman primate mandible. Five Japanese monkeys were used. Three milliliters of bone marrow was obtained from the tibia and plated into culture flasks. Adherent cells were cultured until near confluence; then, the proliferated cells were transferred to a three-dimensional culture system using collagen beads as the cell carrier. The medium was supplemented with ascorbic acid, β-glycerophosphate, and dexamethasone to promote osteoblastic differentiation. After further proliferation on beads, the cells were mixed with a collagen sponge that was impregnated with rhBMP-2 and grafted into surgically created segmental bone defects of the mandibles. Three animals received this treatment, and either culture-expanded cells alone or collagen beads without cells were implanted into the remaining two monkeys as controls. The animals were killed 24 wk after surgery, and the

results were assessed by radiog. and histol. evaluation. The combination
graft of culture-expanded bone marrow cells with rhBMP-2
in a collagen sponge regenerated the mandibular bone completely. By
contrast, the graft of culture-expanded cells alone resulted in only a
small amount of bone formation, and the implantation of collagen beads alone
led to no bone formation. The combination graft of rhBMP-2 and
culture-expanded cells, which requires only a small amount of bone marrow,
is a reliable method for the reconstruction of segmental bone defects of
the mandible.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2005575363 EMBASE
TI Titanium - Hydroxyapatite porous structures for endosseous applications.
AU Popa, C. (correspondence); Vida-Simiti, I.; Batin, G.; Candea, V.
CS Technical University of Cluj-Napoca, 103-105, Bd. Muncii, 400641
Cluj-Napoca, Romania. catalin.popa@stm.utcluj.ro
AU Simon, V.; Simon, S.
CS Babes - Bolyai University of Cluj-Napoca, Romania.
SO Journal of Materials Science: Materials in Medicine, (Dec 2005) Vol. 16,
No. 12, pp. 1165-1171.
Refs: 15
ISSN: 0957-4530 CODEN: JSMMEL
CY Netherlands
DT Journal; Conference Article; (Conference paper)
FS 027 Biophysics, Bioengineering and Medical Instrumentation
033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 2 Feb 2006
Last Updated on STN: 2 Feb 2006
AB Materials for uncemented endosseous implants have to assure an as short as
possible osseointegration time. Thus, a material with both surface
bioactivity and a porous outer structure can become a preferred choice for
this type of applications. This paper presents a class of titanium-base
PM composites, reinforced with particulate hydroxyapatite. Raw materials

were titanium powder, obtained through hydriding - milling - dehydriding, with the grain size of 63-100 μm, and sol-gel hydroxyapatite (HA) powder, produced by the reaction between Ca(NO(3))(2).ovrhdot.4H(2)O and (NH (4))(2)HPO(4). Blends with 5 to 50% HA were prepared and pressed in a rigid die, producing single composition or gradual composition samples. The applied pressure was of 400, 500 or 600 MPa. Sintering was performed in vacuum, at 1160°C. All samples, although well sintered, displayed swelling during sintering, due to diffusion into the matrix. The increase in volume is more severe for higher amounts of HA in the green compacts and for higher applied compaction pressure. Compacts with a gradual increase of the HA content are recommended from the functional and mechanical point of view, but the increase should be slow, not to produce interlayer cracks. The outer surface shows interconnected pores, suitable for the ingrowth of vital new bone. .COPYRGT. 2005 Springer Science + Business Media, Inc.

L20 ANSWER 7 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2004508249 EMBASE

TI Comparison of in vitro mineralization by murine embryonic and adult stem cells cultured in an osteogenic medium.

AU Shimko, Daniel A.; Burks, Chris A.; Dee, Kay C.; Nauman, Eric A., Dr. (correspondence)

CS Department of Biomedical Engineering, Tulane University, New Orleans, LA, United States. enauman@purdue.edu

AU Nauman, Eric A., Dr. (correspondence)

CS School of Mechanical Engineering, 585 Purdue Mall, Purdue University, West Lafayette, IN 47907-2088, United States. enauman@purdue.edu

SO Tissue Engineering, (Sep 2004) Vol. 10, No. 9-10, pp. 1386-1398. Refs: 75 ISSN: 1076-3279 CODEN: TIENFP

CY United States

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical and Experimental Biochemistry
033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 28 Dec 2004
Last Updated on STN: 28 Dec 2004
AB Nearly half a million bone-grafting procedures occurred in the United States in the year 2000. Tissue-engineered bone substitutes may mitigate difficulties associated with current grafting options. Embryonic stem cells (ESCs) could be a potential cell source for bone substitutes; however, direct comparisons between ESCs and other cell sources are lacking. Here we provide a direct, long-term, in vitro comparison of mineralization processes in adult, marrow-derived, mesenchymal stem cells (MSCs) and ESCs from the 129/Sv+c/+p mouse strain. MSCs were observed to grow at a slower rate than ESCs. MSCs expressed seven times more alkaline phosphatase (AP) per cell than did ESCs and immediately showed type I collagen and osteocalcin production. ESCs also produced type I collagen and osteocalcin, but production was delayed. Mineral deposition by ESCs was nearly 50 times higher than by MSCs. Spectroscopic analysis showed the calcium-to-phosphorus ratio (Ca:P) of the ESC mineral (1.26:1) to be significantly higher than that of the MSCs (0.29:1), but still 25% lower than hydroxyapatite (1.67:1). Addition of basic fibroblast growth factor significantly inhibited AP expression, mineral deposition, and Ca:P ratios in MSCs and had little effect on ESCs. These functional characteristics may assist with cell selection for purposes of bone tissue engineering.

L20 ANSWER 8 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 2002260129 EMBASE
TI Investigation into an engraftment defect induced by culturing primitive hematopoietic cells with cytokines.
AU Young, Judy C. (correspondence); Lin, K.; Wu, S.; Travis, M.; Hansteen, G.; Abitorabi, A.; Sirenko, O.; Murray, L.; Hill, B.
CS 2833 Tramanto Drive, San Carlos, CA 94070, United States.
SO Cytotherapy, (2001) Vol. 3, No. 4, pp. 307-320.

Refs: 52
ISSN: 1465-3249 CODEN: CYTRF3
CY United Kingdom
DT Journal; Article
FS 009 Surgery
037 Drug Literature Index
030 Clinical and Experimental Pharmacology
029 Clinical and Experimental Biochemistry
026 Immunology, Serology and Transplantation
025 Hematology
022 Human Genetics
LA English
SL English
ED Entered STN: Sep 2007
Last Updated on STN: Sep 2007
AB Background: Strategies for transplanting primitive hematopoietic progenitor (PHP) cells are under development that require in vitro manipulation of cells for several hours to several days prior to transplantation. This applies to gene-therapy protocols involving transduction with adenoviral or lentiviral vectors (typically 1 day of ex vivo culture) or retroviral vectors (up to 3 days of culture). Methods: Human mobilized peripheral blood (MPB) CD34(+) cells were cultured with the cytokines thrombopoietin mimetic peptide (mTPO), flt3 ligand (FL), and c-kit ligand (KL). Equal numbers of CD34(+) cells, either uncultured or cultured for various time periods up to 5 days, were tested for engraftment in sublethally irradiated 8-10 week-old NOD/SCID mice. Cells were also compared for expression and function of several key surface molecules. Results: At a limiting dose of 1 million cells, mice receiving uncultured cells had a mean of 20% CD45(+) (human) cells in their BM 6 weeks post-transplantation, versus 3% for mice receiving 3-5 day cultured cells. Analysis of 10 surface molecules, CD11a, CD18, CD29, CD49d, CD49e, CXCR-4, CD62L, CD31, CD43, and CD44 over a 5-day culture period showed that their expression levels were either maintained or up-regulated on CD34(+) cells and the primitive Thy-1(+) subset. Similar percentages of uncultured and 3-day cultured MPB CD34(+) cells bound to plates coated with vascular cell adhesion molecule-1 (VCAM-1) under both

static and physiological flow conditions, and chemotaxis of cultured cells
towards stromal-derived factor-1 (SDF-1) was not impaired, suggesting that
VLA-4 and CXCR-4 were functional on cultured cells. CD34(+) Thy-1(+) MPB
cells cultured with cytokines expressed increasing levels of Fas receptor
beginning at 20 h in culture, with peak expression levels after 3 days
(mean Day 0 expression, 39%; mean Day 3 expression, 86%), without
increased apoptosis. Including inhibitors of caspases in the
media of cells cultured for 24-48 h significantly improved their
engraftment in a SCID-hu bone-engraftment model. Discussion: Increased
susceptibility to apoptosis upon in vivo injection may contribute to
impaired engraftment of in vitro manipulated cells. Inhibitors of
apoptosis may increase their engrafting capacity in clinical settings.

L20 ANSWER 9 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1997368118 EMBASE
TI Aspiration to obtain osteoblast progenitor cells from human bone marrow:
The influence of aspiration volume.
AU Muschler, George F., Dr. (correspondence); Boehm, Cynthia; Easley, Kirk
CS Cleveland Clinic, Cleveland, OH, United States. muschler@bme.ri.ccf.org;
muschle@bme.ri.ccf.org
AU Muschler, George F., Dr. (correspondence)
CS Department of Orthopaedic Surgery, Cleveland Clinic Foundation, 9500
Euclid Avenue, Cleveland, OH 44195, United States. muschler@bme.ri.ccf.org
; muschle@bme.ri.ccf.org
AU Boehm, Cynthia
CS Department of Biomedical Engineering, Cleveland Clinic Foundation, 9500
Euclid Avenue, Cleveland, OH 44195, United States.
AU Easley, Kirk
CS Department of Biostatistics, Cleveland Clinic Foundation, 9500 Euclid
Avenue, Cleveland, OH 44195, United States.
SO Journal of Bone and Joint Surgery - Series A, (Nov 1997) Vol. 79, No. 11,
pp. 1699-1709.
Refs: 65

ISSN: 0021-9355 CODEN: JBJSA3
CY United States
DT Journal; Article
FS 033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 20 Jan 1998
Last Updated on STN: 20 Jan 1998
AB Bone marrow contains osteoblast progenitor cells that can be obtained with
aspiration and appear to arise from a population of pluripoteutial
connective-tissue stem cells. When cultured in vitro under conditions
that promote an osteoblastic phenotype, osteoblast progenitor cells
proliferate to form colonies of cells that express alkaline phosphatase
and, subsequently, a mature osteoblastic phenotype. We evaluated the
number of nucleated cells in bonemarrow samples obtained with aspiration
from the anterior lilac crest of thirty-two patients without systemic
disease. There were nineteen male patients and thirteen female patients;
the mean age was forty-one years (range, fourteen to seventy-seven years).
The prevalence and concentration of the osteoblast progenitor cells also
were determined, by placing the bone- marrow-derived cells into
tissue-culture medium and counting the number of alkaline
phosphatase-positive colony-forming units. In order to assess the effect
of aspiration volume, two sequential experiments were performed. In the
first experiment, aspiration volumes of one and two milliliters
were compared. In the second experiment, aspiration volumes of two and
four milliliters were compared. The mean prevalence of alkaline
phosphatase- positive colony-forming units in the bone-marrow samples was
thirty-six perone million nucleated cells (95 per cent
confidence interval, 28 to 47); a mean of 2400 alkaline
phosphatase-positive colony-forming units was obtained from a two-
milliliter aspirate. There was a significant difference among the
patients with respect to the number of alkaline phosphatase-positive
colony- forming units in these bone-marrow samples ($p < 0.001$). Seventy

per cent of this variation in the prevalence was due to variation among
patients, and 20 per cent was due to variation among aspirates. The
number of alkaline phosphatase-positive colonyforming units in the
aspirate increased as the aspiration volume increased. However,
contamination by peripheral blood also increased as the aspiration volume
increased. An increase in the aspiration volume from one to four
milliliters caused a decrease of approximately 50 per cent in the
final concentration of alkaline phosphatasepositive colony-forming units
in an average sample. CLINICAL RELEVANCE: On the basis of these data, we
recommend that, when bone marrow is obtained with aspiration for use as a
bone graft, the volume of aspiration from any one site
should not be greater than two milliliters. A larger volume
decreases the concentration of osteoblast progenitor cells because of
dilution of the bone-marrow sample with peripheral blood. We estimate
that four one-milliliter aspirates will provide almost twice the
number of alkaline phosphatase-positive colony- forming units as will one
four-milliliter aspirate. In addition, these data confirm that
humans differ significantly from one another with respect to the
cellularity of bone marrow and the prevalence of osteoblast progenitor
cells. Additional studies are necessary to determine if the number or
prevalence of alkaline phosphatase-positive colony-forming units in bone
marrow is a determining factor in the efficacy of an autogenous
bone or bone-marrow graft and to ascertain how
the number and function of alkaline phosphatase-positive colony-forming
units may change as a function of factors such as age, menopausal status,
and selected diseases.

L20 ANSWER 10 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1996355607 EMBASE
TI Partial purification and characterization of bone morphogenetic protein
from bone matrix of the premature moose (Alces alces): Degradation of
bone-inducing activity during storage.
AU Viljanen, V.V., Dr. (correspondence); Gao, T.J.; Marttinen, A.; Lindholm,

T.S.
CS Bone Transplantation Research Group, Medical School, University of
Tampere, Finland.
AU Viljanen, V.V., Dr. (correspondence)
CS Institute of Medical Technology, PO Box 607, FIN-33101 Tampere, Finland.
SO European Surgical Research, (Nov 1996) Vol. 28, No. 6, pp. 447-460.
Refs: 26
ISSN: 0014-312X CODEN: EUSRBM
CY Switzerland
DT Journal; Article
FS 009 Surgery
LA English
SL English
ED Entered STN: 10 Dec 1996
Last Updated on STN: 10 Dec 1996
AB In spite of the advances in recombinant techniques in the production of
bone morphogenetic proteins (BMPs), the best clinical results so far have
been obtained with human and animal source-extracted BMPs. Also, the poor
availability of recombinant products gives rise to continued research with
different extracted and purified proteins. In a search for a new source
of bone-matrix-derived BMP with high osteoinductive activity, BMP was
extracted from fresh bone matrix of the premature moose (Alces acles).
Bone-inducing activity was investigated by implanting 0.5-20 mg of BMP
into thigh muscle pouches of BALB mice. Radiologically detectable
formation of new bone required 2.0 mg of partially purified BMP.
Immediately after the extraction, an analytic chromatogram with known
molecular weight (MW) markers showed three fractions with different MWs.
After 15 months of storage at +1°C lyophilized and desiccated, BMP
was fractionated by HPLC gel filtration and bioassayed. New bone
formation was evaluated qualitatively by histology and quantitatively by
radiomorphometry, the quantity of calcified tissue per milligram
of implanted agent being determined. Fractions I and III, with high
(100-700 kD) and low MW (15-25 kD), respectively, were apparently more
effective inducers of new bone than the second-time-tested partially

purified BMP complex, the activity of which had significantly (p < 0.05)
decreased during 15 months of storage compared to initial results after
extraction. However, the bone-inducing activity of fractions I and III
corresponded closely to the initial activity of the BMP complex. Fraction
II, with medium MW (25-55 kD), caused an apparent inflammatory
reaction and no bone formation, and was thought to be immunogeneic.
Fraction III was considered to include the dominant BMP component with MW
18.5 and fraction I an association of BMP with other non-collagenous bone
matrix proteins after one-step gel filtration. The results suggest that
BMP from the premature moose has high bone-forming activity. With
identification and removal of apparently immunogenic protein fractions,
the inflammatory reaction and inhibitory effect on bone induction could be
eliminated, and still higher bone-forming activity was attained. Acid
protease enzymes were assumed to be responsible for the observed decline
in the inductive activity of semipurified BMP after 15 months of storage,
as both osteoinductive fractions proved to be acidic in isoelectric
focusing.

=> d his

(FILE 'HOME' ENTERED AT 15:54:32 ON 24 APR 2009)

FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 15:54:40 ON 24 APR 2009
L1 111 S BONE PARTICLE
L2 1693 S IMMOBILI? (3A) (MEDIUM OR MEDIA)
L3 1 S L1 AND L2
L4 15 S L2 AND BONE
L5 11 DUP REM L4 (4 DUPLICATES REMOVED)
L6 1206717 S BONE
L7 23765 S L6 AND WATER
L8 914 S L7 AND DIVID?
L9 39 S L8 AND SEPARAT?
L10 33 DUP REM L9 (6 DUPLICATES REMOVED)
L11 852 S BONE (3A) PARTICLE
L12 24019 S TISSUE (3A) (GRAFT OR GENERA?)
L13 4 S L11 AND L12

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L14             3 DUP REM L13 (1 DUPLICATE REMOVED)
L15         23448 S BONE (3A) GRAFT
L16           424 S L15 AND (MEDIUM OR MEDIA)
L17             0 S L16 AND SOLIDF?
L18             0 S L16 AND SOLIDIF?
L19            12 S L16 AND MILL?
L20            10 DUP REM L19 (2 DUPLICATES REMOVED)

=> s l16 and free?
L21            46 L16 AND FREE?

=> dup rem l21
PROCESSING COMPLETED FOR L21
L22            40 DUP REM L21 (6 DUPLICATES REMOVED)

=> s l22 and py<=2002
L23            25 L22 AND PY<=2002

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):y

L23  ANSWER 1 OF 25  BIOSIS  COPYRIGHT (c) 2009 The Thomson
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AN   1995:16806  BIOSIS
DN   PREV199598031106
TI   Effect of intravenous administration of
hydroxyethyl-starch-deferoxamine
     on oxygen-derived free radical generation in cancellous bone
     specimens obtained from dogs.
AU   Lewis, Daniel D. [Reprint author]; Church, Daniel F.; Hosgood,
Giselle
CS   Dep. Small Anim. Clin. Sci., Coll. Vet. Med., Univ. Florida,
Gainesville,
     FL 32610, USA
SO   American Journal of Veterinary Research, (1994) Vol. 55, No. 11,
     pp. 1613-1617.
     CODEN: AJVRAH. ISSN: 0002-9645.
DT   Article
LA   English
ED   Entered STN: 11 Jan 1995
     Last Updated on STN: 12 Jan 1995
AB   The ability of IV administered hydroxyethyl-starch-deferoxamine
to
     attenuate radical production in freshly procured cancellous bone
specimens
     was investigated, using spin-trapping and electron spin
resonance (ESR)
     techniques.  A core cancellous bone specimen 10 mm long and 5.6
nun in
     diameter was obtained, using aseptic technique, from the
proximal portion
     of the humerus of 30 adult mixed-breed dogs.  After procurement
of the
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initial bone specimen, 10 dogs received a 10% solution of hydroxyethyl-starch-deferoxamine in 0.9% NaCl (50 mg/kg of body weight, iv), 10 dogs received an equivalent volume (5 ml/kg, IV) of a 10% solution of hydroxyethyl-starch in 0.9% NaCl, and 10 dogs received 0.9% saline solution (5 ml/kg, IV). A second core cancerous bone specimen was obtained from the contralateral humerus of each dog 45 minutes after treatment. All specimens were individually incubated in the spin trap alpha-phenyl-N-tert-butylnitrone in Eagle's minimum essential medium, at 26 C for 45 minutes, then were frozen at -20 C until they were prepared for analysis by ESR spectroscopy. Each specimen was thawed, homogenized, and extracted in a low-dielectric organic solvent prior to obtaining an FSR spectrum, which was analyzed for hyperfine splitting constants for radical identification. Each first-derivative spectrum was digitally double-integrated to obtain an area; these areas were used to compare intensities of the spin adducts. Difference in the area obtained before and after treatment for each dog was expressed as a ratio of that dog's pretreatment area ((pretreatment - posttreatment)/pretreatment). The calculated ratios for saline-, hydroxyethyl-starch-, and hydroxyethyl-starch-deferoxamine-treated dogs were compared, using a Kruskal-Wallis (KW) nonparametric test for multiple comparisons of ranked data. Significance was determined at P ltoreq 0.05.

Ad hoc comparisons were performed, using the KW procedure for individual comparisons, with alpha set at 0.05. The mean +- SD and median ratio for each of the treatment groups were: saline-treated dogs, 0.005 +- (0.40 and 0.045; hydroxyethyl-starch-treated dogs, -0.063 +- 0.27 and -0.025; hydroxyethyl-starch-deferoxamine-treated dogs, 0.261 +- 0.278 and 0.335, respectively. There was a significant (P lt 0.01, KW) difference in the ratios between treatment groups. Ratios for hydroxyethyl-starch-deferoxamine-treated dogs were significantly (P lt

0.05, KW) higher than that for hydroxyethyl-starch-treated dogs but not
for saline-treated dogs. The ratios for saline- and
hydroxyethyl-starch-treated dogs were not significantly different. We
could not associate significant attenuation of radical generation in
freshly harvested core cancellous bone specimens with IV administration of
hydroxyethyl-starch-deferoxamine. The potential for unconjugated
hydroxyethyl-starch to function as an oxidant must considered.

L23 ANSWER 2 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1994:527626 BIOSIS
DN PREV199497540626
TI Cytokine stimulation of CD34+ bone marrow cells prior to cryopreservation
enhances their post-thawing proliferative potential.
AU Ratajczak, Mariusz Z. [Reprint author]; Ratajczak, Janina; Kregenov, David
A.; Kuczynski, Wojciech I.; Skorski, Tomasz; Gewirtz, Alan M.
CS Dep. Pathol., 230 John Morgan Build., Univ. Pennsylvania, 36th St. and
Hamilton Walk, Philadelphia, PA 19104, USA
SO Folia Histochemica et Cytobiologica, (1994) Vol. 32, No. 3, pp. 149-153.
CODEN: FHCYEM. ISSN: 0239-8508.
DT Article
LA English
ED Entered STN: 15 Dec 1994
Last Updated on STN: 15 Dec 1994
AB Marrow aplasia remains a significant cause of morbidity and mortality in
the peri-transplant period. Administration of recombinant human
hematopoietic growth factors along with the marrow graft is a widely used
strategy to ameliorate this problem. Though arguably effective, this
approach is extremely expensive. To develop alternative strategies for
stimulating marrow engraftment, we investigated the utility of stimulating
CD34+ enriched bone marrow cells with cytokines prior to cryopreservation.
We found that culturing these cells for 1 to 3 days in Iscove's
medium supplemented with kit ligand (KL), interleukin-3 (IL-3),
interleukin-1-beta (IL-1-beta) and 20% bovine calf serum before
freezing doubled the proliferative capacity of both myeloid and
erythroid progenitor cells after thawing. Confirmation of increased
proliferative activity in vivo would suggest that this approach might

significantly shorten the period of marrow aplasia post transplant at far
less expensive means.

L23 ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1993:114401 BIOSIS
DN PREV199395058501
TI Validation of a serum-free growth factor-replenished in vitro
culture system for hematopoietic progenitor cells in healthy donors and
recipients of an allogeneic bone marrow graft.
AU Van Den Berg, H. [Reprint author]; Van Tol, M. J. D.; Oudeman-Gruber, N.
J.; Waaijer, J. L. M.; Wagemaker, G.; Vossen, J. M.
CS Dep. Pediatrics, Leiden Univ. Hosp., P.O. Box 9600, 2300 RC Leiden, The
Netherlands, netherlands
SO European Journal of Haematology, (1992) Vol. 49, No. 5, pp. 269-274.
CODEN: EJHAEC. ISSN: 0902-4441.
DT Article
LA English
ED Entered STN: 27 Feb 1993
Last Updated on STN: 27 Feb 1993
AB The in vitro colony formation of hematopoietic progenitor cells of bone
marrow samples, taken before and early after allogeneic bone marrow
transplantation (BMT), was investigated prospectively. In order to
circumvent culture-related and sample-related variations, a serum-
free recombinant growth factor-replenished cultured system was
developed using T cell- and monocyte-depleted bone marrow samples.
Samples of healthy bone marrow donors were used to validate the technique.
The standardized culturing technique gave reproducible results, with
numbers of colonies above those in conventional conditioned-medium
technique. Colony formation in vitro of myelomonocytic precursor cells
was found decreased in graft recipients, also after addition of growth
factors, in comparison with healthy donors. The growth-promoting effect
of the combination of IL-3 + GM-CSF was superior to that of either growth
factor alone or conditioned medium. No effect was observed of T
lymphocytes and monocytes on in vitro colony formation after bone marrow

transplantation, probably as a result of functional impairment of these
cells at that period after transplantation.

L23 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1992:139197 BIOSIS
DN PREV199293073422; BA93:73422
TI BONE TISSUE INVESTIGATION FOLLOWING MUSCLE-PEDICLE GRAFTING BONE IN
RABBITS.
AU LU G [Reprint author]; ET AL
CS DEP ORTHOPAEDIC SURGERY, THE FIRST AFFILIATED HOSP, CHINA
SO Journal of China Medical University, (1991) Vol. 20, No. 4, pp. 288-291.
CODEN: ZYDXEN. ISSN: 0258-4646.
DT Article
FS BA
LA CHINESE
ED Entered STN: 12 Mar 1992
Last Updated on STN: 12 Mar 1992
AB Thirty rabbits were employed in this study. Glutaeus medium pedicle iliac bone graft was sectioned from left hip.
Free bone graft was resected from right hip as
a control. Bone grafts were surrounded with clinical pellicle of silica
gel, then fixed in subcutaneous tissue. The animals were sacrificed and
the specimens were taken for examination at 1, 2 and 3 weeks after the
operation respectively. The results were as follows: 1. Histological
components of the free bone graft were
necrotic widely, but less amounts of cells survived. 2. Muscle-pedicle
grafting bone gained nutrient from osteo-myogenic arterial system in the
muscle pedicle. 3. Muslce-pedicle iliac bone graft
retained bone tissue viability contiguous to the muscle pedicle, and produced new bone in regenerating player of periosteum.

L23 ANSWER 5 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1991:521457 BIOSIS
DN PREV199192132917; BA92:132917
TI RECONSTRUCTION OF THE JAW WITH A FREE VASCULARIZED BONE
GRAFT WITH SPECIAL REFERENCE TO THE SELECTION OF DONOR MATERIAL.
AU HARASHINA T [Reprint author]; INOUE T; UEDA K; HARADA T; SHIDARA Y; TERADA
W; FUKUTAKE K
CS DEP PLASTIC RECONSTRUCTIVE SURGERY, SAITAMA MED CENT, SAITAMA MED SCH,

KAWAGOE 350, JPN
SO Japanese Journal of Plastic and Reconstructive Surgery, (1991) Vol. 34, No. 9, pp. 941-950.
CODEN: KEGEAC. ISSN: 0021-5228.
DT Article
FS BA
LA JAPANESE
ED Entered STN: 19 Nov 1991
Last Updated on STN: 19 Nov 1991
AB From April 1977 up to the present report, the authors have experienced 21
cases of a microsurgical reconstruction of the upper and/or lower jaws.
These cases have been analyzed from several aspects, especially with
regard to the selection of donor materials to be used for this purpose.
Out of the 21 cases, 3 involved the reconstruction of the upper jaw, and
the remaining 18 involved the lower jaw. Used for these reconstructions
were the following donor materials: 3 ribs, 8 iliums, 5 scapulas and 5
radiuses. Based on these experiences, the donor material used depends on
the repair required. A rib, for instance, is of use for a defect
requiring a long bone or, say, for augmentation of mentum in an irradiated
case. An ilium is no longer a popular donor choice due to its excessive
bulk and poor circulation within a skin island. However, it is good for
the reconstruction of an ascending ramus, with or without a TM joint
reconstruction. A radius is an appropriate donor choice for a small bony
defect with a small or medium-sized intraoral lining. A scapula
also is excellent donor material when concomitant soft tissue defect is
extensive. However, when an osteotomy of the scapula is required,
circulation in the distal bony segment cannot always be guaranteed. While
the authors have had no experience using a fibula in a mandibular
reconstruction, they feel that this donor material will gain more
popularity because it provides a tough, long bone, and allows for a
two-team approach, since the graft can be harvested while the patient is
in a supine position.

L23 ANSWER 6 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1986:171926 BIOSIS
DN PREV198681082342; BA81:82342
TI MOUSE SKIN GRAFT PROLONGATION WITH DONOR-STRAIN BONE MARROW AND ANTILYMPHOCYTE SERUM EFFECT OF BONE MARROW CELL STORAGE.
AU DE FAZIO S R [Reprint author]; HARTNER W C; MONACO A P; GOZZO J J
CS COLL PHARMACY AND ALLIED HEALTH, ROOM 211 MUGAR HALL, NORTHEAST UNIV, 360 HUNTINGTON AVE, BOSTON, MASS 02115, USA
SO Transplantation (Baltimore), (1986) Vol. 41, No. 1, pp. 26-28. CODEN: TRPLAU. ISSN: 0041-1337.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 26 Apr 1986
Last Updated on STN: 26 Apr 1986
AB Significant extended survival of C3H/He skin grafts in antilymphocyte serum (ALS)-treated B6AF1 mice can be brought about by the injection of donor-strain bone marrow on day 6 or 7 after grafting. In the present study, survival of the active graft-prolonging bone marrow cells under several storage conditions was investigated. The bone marrow cells retained their effectiveness if stored at4° C in 10% fetal calf serum for 18 hr prior to injection, but not if maintained at 37° C under standard lymphocyte culture conditions. Freezing the cells for 10 days in the cryoprotective medium preserved the ability of the cells to prolong graft survival. In fact, freeze thawed cells were more effective than fresh cells. Extension of the ALS-bone marrow treatment protocol to human transplantation is expected to be facilitated by frozen and short-term refrigerated storage of the donor bone marrow.

L23 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1962:438762 CAPLUS
DN 57:38762
OREF 57:7783f-i
TI Studies in the transplantation of bone. III. The immune responses of lymph nodes draining components of fresh homologous cancellous bone treated by different methods
AU Burwell, R. Geoffrey; Gowland, G.
CS Univ. Leeds, UK
SO J. Bone Joint Surg. 44B (1962) 131-48
DT Journal
LA Unavailable

AB cf. ibid. 43B, 814, 820(1961). Homologous grafts of cancellous bone (about 100 mg.) were inserted into the subcutaneous tissues of the left ear of rabbits. Some of the bones were pretreated by (a) boiling water for 10 min.; (b) freezing at -20° for 1 week; (c) immersion in 80% Ringer solution, 15% glycerol, and 5% donor serum and freezing at -79° for 1 week; (d) freeze-drying for 48 hrs.; (e) storing in solid CO2 and irradiating with 2 + 106 rads from a Co source; and (f) storing in 0.1% Merthiolate at 4° for 6 weeks. Five or 8 days after inserting the graft, the regional lymph nodes draining the graft and the control contralateral lymph nodes were removed, weighed, fixed in Carnoy fluid, and histol. sections were stained with methyl green-pyronine. The grafted tissues were fixed in 10% HCHO-saline, decalcified in ethylenediaminetetraacetate, and histol. sections were stained. The results suggested that fresh homologous bone marrow was highly antigenic, whereas marrow-free homologous cancellous bone was weakly antigenic. Treatments (a), (b), (d), (e), and (f) markedly reduced its antigenicity, whereas there was only a small reduction in antigenicity after (c). The conclusion was reached that the principal antigenic component. of fresh bone is the nucleated cells of red marrow. The immune response of large- and medium-sized cells of lymph nodes draining homografts is due principally to the T antigens. It was suggested that this lymph node response may be generally useful as an assay of the antigenicity of transplanted tissues. 63 references.

L23 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1951:47563 CAPLUS
DN 45:47563
OREF 45:8115b-d
TI The role of alkaline phosphatase in osteogenesis
AU Siffert, Robert S.
CS Mount Sinai Hosp., New York, NY
SO Journal of Experimental Medicine (1951), 93, 415-26
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal

LA Unavailable
AB The observations on the sites of localization of alkaline phosphatase (I) and
phosphate (II) in epiphyseal ossification were compared with the findings
on the ossification of bone graft beds. The
distribution of chondroitinsulfate and the elaboration of bone matrix in
relation to II deposition was also studied. I activity and free
II do not always coincide. I appears to be intimately connected with
preosseous cellular metabolism and to the elaboration of a bone matrix
that is chemically calcifiable. There is a possibility that I may be
involved in making inorg. salts available to the calcifiable matrix. If
this function exists, it is secondary because elaboration of bone matrix,
which is always associated with I activity, is able to occur in the
absence of calcification. It is possible for calcification to occur later
in the absence of I. Cartilage matrix may be utilized in the formation of
bone matrix. I is physiologically active only in the presence of living
cells. I appears to be physiologically inactive in the cartilage remnants
of the metaphysis. Since I is reversibly inactivated in weakly acid
media, it is possible that the enzyme may survive in a
physiologically inactive state in weakly acid tissues and yet remain
capable of histochem. demonstration in vitro in an alkaline medium.
I is not related to the disappearance of chondroitinsulfate.

L23 ANSWER 9 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2002096935 EMBASE
TI The effects of varying degrees of allograft decalcification on cultured
porcine osteoclast cells.
AU Herold, Robert W.; Pashley, David H.; Cuenin, Michael F.; Niagro, Frank;
Hokett, Steven D. (correspondence); Peacock, Mark E.; Mailhot, Jason;
Borke, James
CS Tingay Dental Clinic, U.S. Army Dental Activity, Bldg. 320, East Hospital

Road, Fort Gordon, GA 30905, United States.
steven.hokett@se.amedd.army.mi
l
SO Journal of Periodontology, (2002) Vol. 73, No. 2, pp. 213-219.
Refs: 29
ISSN: 0022-3492 CODEN: JOPRAJ
CY United States
DT Journal; Article
FS 027 Biophysics, Bioengineering and Medical Instrumentation
009 Surgery
LA English
SL English
ED Entered STN: 28 Mar 2002
Last Updated on STN: 28 Mar 2002
AB Background: Demineralized freeze-dried bone allograft (DFDBA) is widely used in periodontal therapy as a scaffold for new bone formation in periodontal defects. It is demineralized, theoretically, to expose osteoinductive or osteoconductive bone matrix proteins that should facilitate osteogenesis. The degree of DFDBA demineralization varies between tissue banks and may affect clinical regeneration. A 2% residual calcium level in DFDBA has been shown to result in the highest alkaline phosphatase activity levels in cultured human periosteal cells and is optimally osteoinductive or osteoconductive for new bone formation. The purpose of this study was to evaluate the effect of 4 different residual calcium levels in commercially available DFDBA samples on porcine osteoclast activity as measured by resorption on calcium phosphate-coated disks. Methods: Bone marrow was harvested from the femurs of 3-week-old farm pigs and cultured for 3 weeks. Hematopoietic stem cells were allowed to differentiate into mature active polykaryons displaying genuine osteoclast characteristics. The osteoclast cells displayed a dense actin band inside the margins of the cytoplasm under light microscopy. Culture media was decanted and collagenase added to free the attached cells. Equal cell samples were pipetted onto calcium phosphate-coated disks in 24-well plates. DFDBA samples with 1.44%, 2.41%, and 5.29% residual calcium; FDBA (30% residual calcium); and

control cultures without allograft samples were prepared and all samples
incubated for 1 week. Cells were fixed and stained for tartrate-resistant
acid phosphatase (TRAP), Oregon Green 488-phalloidin, a stain for
cytoskeletal proteins, and counterstained with propidium iodide.
Specimens were examined by light and fluorescence microscopy using
epi-illumination. Calcium phosphate disks were then rinsed in 5% sodium
hypochlorite to remove adherent osteoclasts, and substrate surface changes
were measured by white light interferometry and image analysis.
Results:
A higher yield of TRAP-positive cells was produced without DFDBA; however,
resorptive activity appears to be significantly increased in the presence
of 2.41% residual calcium as compared to all other experimental groups (P
<0.0065). Conclusion: In this in vitro model, porcine osteoclasts show
significantly more resorptive activity as measured on calcium
phosphate-coated disks in the presence of 2.41% residual calcium in DFDBA
than in other DFDBA residual calcium levels.

L23 ANSWER 10 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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AN 2002029637 EMBASE
TI The role of angiography in the lower extremity using free
vascularized fibular transplants for mandibular reconstruction.
AU Kessler, Peter, Dr. (correspondence); Wiltfang, Jorg; Schultze-Mosgau,
Stefan; Lethaus, Bernd
CS Department of Oral and Maxillofacial Surgery, Germany. peter.kessler@mkg.i
med.uni-erlangen.de
AU Greess, Holger; Wilhelm Neukam, Friedrich
CS Institute of Diagnostic Radiology, University of Erlangen-Nurnberg,
Erlangen, Germany.
AU Kessler, Peter, Dr. (correspondence)
CS Dept. of Oral/Maxillofacial Surgery, Univ. of Erlangen-Nurnberg,
Gluckstrasse 11, D-91054 Erlangen, Germany. peter.kessler@mkg.imed.uni-erl
angen.de
SO Journal of Cranio-Maxillofacial Surgery, (2001) Vol. 29, No. 6, pp.
332-336.
Refs: 18

ISSN: 1010-5182 CODEN: JCMSET
CY United Kingdom
DT Journal; Article
FS 011 Otorhinolaryngology
014 Radiology
016 Cancer
033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 7 Feb 2002
Last Updated on STN: 7 Feb 2002
AB Background: Fibular osteocutaneous free tissue transfer represents the work horse procedure in the reconstruction of large oromandibular defects. Before the fibula is harvested the blood supply of the lower leg and foot should be examined, as the perfusion may be based predominantly on the peroneal artery and venae comitantes. To avoid postoperative ischaemia of the lower leg, adequate perfusion must be guaranteed before sacrificing the peroneal vessels. Anatomical variations and peripheral arterial occlusive disease add to the risk of ischaemia.
Various methods of evaluating the blood supply have been described.
Material and methods: Fifty-two consecutive cases of fibular flaps were evaluated to study the arterial blood supply of the lower extremity. For angiography, the right femoral artery was punctured using the Seldinger technique and a total of 20-25 ml contrast medium (Imeron® 300) was infused and images required at a rate of 0.5/sec. Results: A patent three-vessel supply to both feet could only be detected in 21 patients. Thirty-one angiograms revealed anatomic and/or arteriosclerotic alterations. Angiography provided accurate information in all patients and allowed successful fibular transfer in those patients who were found preoperatively to have regular conditions. Conclusion: Preoperative assessment of the blood supply of the lower extremity is important before fibular osteocutaneous free tissue transfer. We advocate angiography as interpretation is not examiner dependent.

European Association for Cranio-Maxillofacial Surgery.

L23 ANSWER 11 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2001167835 EMBASE
TI Frontal sinus malignancies.
AU Osguthorpe, J. David, Dr. (correspondence); Richardson, Mary
CS Departments of Otolaryngology and Communicative Sciences and Pathology,
Medical University of South Carolina, Charleston, SC, United States.
AU Osguthorpe, J. David, Dr. (correspondence)
CS Medical University of South Carolina, 150 Ashley Avenue, Charleston, SC
29425, United States.
SO Otolaryngologic Clinics of North America, (2001) Vol. 34, No. 1, pp.
269-281.
Refs: 23
ISSN: 0030-6665 CODEN: OCNABW
CY United States
DT Journal; General Review; (Review)
FS 011 Otorhinolaryngology
016 Cancer
027 Biophysics, Bioengineering and Medical Instrumentation
LA English
SL English
ED Entered STN: 23 May 2001
Last Updated on STN: 23 May 2001
AB Frontal sinus malignancies comprise 2% to 3% of those occurring in the
paranasal region. Patients commonly present with forehead pain and
swelling, orbital disturbances, epistaxis, and nasal purulence. A
combination of CT and MR imaging delineate the tumor and its relationship
with the adjacent dura and periorbita. Low-grade malignancies are
addressed with en bloc extirpation, with lower frontal sinus and adjacent
ethmoid lesions approached through a superior rhinotomy, and more
extensive lesions through a combination of a bicoronal flap and rhinotomy.
Postoperative irradiation is appropriate for medium- to
high-grade lesions. Small to medium defects are closed with
local rotation flaps and larger defects with free flaps. Bony
reconstruction can range from a split calvarial bone
graft to mini plates and wire mesh.

L23 ANSWER 12 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

reserved on STN
AN 2001070341 EMBASE
TI [Postoperative monitoring of vascularized free fibular grafts by dynamic contrast-enhanced of MRI. A preliminary report on three cases of mandibular reconstruction].
Surveillance postoperatoire des lambeaux libres osseux de perone ou fibula par IRM dynamique. Resultats preliminaires a propos de trois cas en reconstruction mandibulaire.
AU Bey, E. (correspondence); Paranque, A.; Cariou, J.L
CS Service de Chirurgie Plastique, Hopital d'Instruction des Armees Begin, 94100 Saint-Mande, France.
AU Pharaboz, C.
CS Service de Radiologie, Hopital d'Instruction des Armees Begin, 94100 Saint-Mande, France.
AU Bey, E. (correspondence)
CS Service de Chirurgie Plastique, Hop. d'Instruction des Armees Begin, 69, avenue de Paris, 94100 Saint-Mande, France.
SO Annales de Chirurgie Plastique et Esthetique, (2001) Vol. 46, No. 1, pp. 10-17.
Refs: 15
ISSN: 0294-1260 CODEN: ACESEQ
CY France
DT Journal; Article
FS 011 Otorhinolaryngology
014 Radiology
009 Surgery
LA French
SL English; French
ED Entered STN: 1 Mar 2001
Last Updated on STN: 1 Mar 2001
AB The vascularized free fibular graft has been used in mandibular reconstructive surgery since 1975. This technique has been progressively developed, and it is now the procedure of choice for mandibular reconstruction although in certain postoperative circumstances it can be difficult if not impossible to monitor bone vitality. However, bone vascularization can be detected by dynamic magnetic resonance imaging (MRI), as this technique has been experimentally and clinically validated in the early diagnosis of osteonecrosis. The aim of this study was to evaluate the efficacy of MRI for the postoperative monitoring of

vascularized free fibular grafts in human mandibular reconstruction. Dynamic contrast-enhanced MRI was used to study the variation in contrast over time following injection of gadolinium contrast medium, and to evaluate the degree of bone marrow perfusion of the fibular graft. This variation in signal intensity was visualized in the form of a curve, i.e., a perfusion curve for the bone marrow region. An examination was performed in three patients at different postoperative times and under different conditions. In one case, MRI confirmed the presence of fibula blood supply in spite of the necrosis of the adjacent fascio-adipose layer. In this article, the methodological difficulties have been discussed, particularly as regards data processing, and the present results have been compared with the findings in the literature. Dynamic MRI is a simple, reliable, non-invasive technique and its use in the postoperative monitoring of bone marrow perfusion and vascularized free fibular grafts permits a determination of the status of the latter following surgery, i.e., whether there is an adequate blood supply or not. .COPYRGT. 2001 Editions scientifiques et medicales Elsevier SAS.

AN 2000425798 EMBASE
TI [Multislice CT: Principles and new CT-scan applications]. Scanners multicoupes: Principes et nouvelles applications scanographiques.
AU Blum, A. (correspondence); Walter, F.; Ludig, T.; Zhu, X.; Roland, J.
CS Service d'Imagerie Guilloz, Hopital Central, CHU Nancy, 29, avenue de-Lattre-de-Tassigny, 54035 Nancy Cedex, France.
SO Journal de Radiologie, (2000) Vol. 81, No. 11, pp. 1597-1614. Refs: 31
ISSN: 0221-0363 CODEN: JRMDAH
CY France
DT Journal; Article
FS 014 Radiology
006 Internal Medicine

LA French
SL English; French
ED Entered STN: 21 Dec 2000
Last Updated on STN: 21 Dec 2000
AB The introduction of new array detector technology for multislice CT
improves CT-scan capabilities. Compared to single-slice helical CT, this
technique offers three significant advantages: the pitch can be increased
by a factor of 4, resulting in shorter acquisition times and contrast
media saving, the temporal and spatial resolution are improved and
the slice thickness can be freely and retrospectively selected.
This technique promises to revolutionize radiological practice, just as
spiral systems did a decade ago. Multislice CT is particularly suitable
for exploring the chest, the heart and the vessels. It is also specially
useful for musculo-skeletal explorations and trauma patients.

L23 ANSWER 14 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 2000179889 EMBASE
TI Resection arthrodesis of the knee with a vascularised fibular graft:
Medium- to long-term results.
AU Wada, Takuro, Dr. (correspondence); Usui, Masamichi; Nagoya, Satoshi; Isu,
Kazuo; Yamawaki, Shinya; Ishii, Seiichi
CS Sapporo Medical University, National Sapporo Hospital, Sapporo, Japan.
AU Wada, Takuro, Dr. (correspondence); Usui, Masamichi; Nagoya, Satoshi;
Ishii, Seiichi
CS Department of Orthopaedic Surgery, Sapporo Medical University, S-I, W-16,
Sapporo 060-8543, Japan.
AU Isu, Kazuo; Yamawaki, Shinya
CS Orthopaedic Clinic, National Sapporo Hospital, 4-2 Kikusui, Sapporo 030,
Japan.
AU Wada, Takuro, Dr. (correspondence)
CS Dept. of Orthopaedic Surgery, Sapporo Medical University, S-1, W-16,
Sapporo 060-8543, Japan.
SO Journal of Bone and Joint Surgery - Series B, (May 2000) Vol. 82, No. 4,
pp. 489-493.

Refs: 16
ISSN: 0301-620X CODEN: JBSUAK
CY United Kingdom
DT Journal; Article
FS 033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 8 Jun 2000
Last Updated on STN: 8 Jun 2000
AB We present the results in 12 patients of arthrodesis of the knee using a
vascularised fibular graft after resection of a malignant bone tumour. At
a mean follow-up of 95 months (60 to 178) all patients were free
from disease although 11 had had at least one complication, with stress
fracture of the graft in five patients, nonunion in two and deep infection
requiring above-knee amputation in one. Despite the high rate of
complications, satisfactory results can be obtained using this technique.
Careful preoperative counselling is required.

L23 ANSWER 15 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1999359296 EMBASE
TI Acetabular reconstruction with morcellized allograft and ring support: A
medium-term review.
AU Haddad, F.S. (correspondence)
CS 46B Hanover Gate Mansions, Park Road, London NW1 4SN, United Kingdom.
AU Shergill, N.; Muirhead-Allwood, S.K.
SO Journal of Arthroplasty, (Oct 1999) Vol. 14, No. 7, pp. 788-795.
Refs: 33
ISSN: 0883-5403 CODEN: JOAREG
CY United States
DT Journal; Article
FS 033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 29 Oct 1999
Last Updated on STN: 29 Oct 1999
AB Acetabular bone stock deficiency is commonly encountered in revision hip
surgery. A number of techniques are available to address this problem,
including the use of particulate allograft with reconstruction rings in an
effort to provide a stable construct and replenish bone stock. Our

technique and results using such devices in complex acetabular deficiencies are described. In the setting of a large medial segmental or cavitary acetabular defect, morcellized bone-graft is used to reconstitute the acetabular floor. This graft is reverse reamed until its depth allows screw fixation of a metallic support ring. The screws also serve to compress the graft. A polyethylene acetabular component is then cemented into the reconstituted acetabulum with full freedom of orientation. A series of 48 patients in whom this technique was employed is presented. These cases have been clinically and radiologically reviewed with a mean follow-up of 64 months (range, 25-102 months). Good bony incorporation with stable acetabular components was seen in all but the two cases in which sepsis predominated.

L23 ANSWER 16 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 1998006688 EMBASE
TI [Cement-free revision arthroplasty of the acetabulum - Medium range results of the trabecular cup implant]. Zementfreie revisionsarthroplastik der huftpfanne - Mittelfristige ergebnisse mit dem trabekular orientierten pfannenimplantat.
AU Wirtz, D.; Thielemann, F.; Holz, U.
CS Orthopadische Universitatsklinik, Klinik fur Unfall- und Wiederherstellungschirurgie, Zentrum fur Chirurgie.
AU Wirtz, D.
CS WirtKlinik fur Unfall- und Wiederherstellungschirurgie, Zentrum fur Chirurgie Katharinenhospital Stuttgart, Kriegsbergstrae 60, D-70174 Stuttgart.
AU Wirtz, D.C., Dr. (correspondence)
CS Klin. Unfall/Wiederherstellungschir., Zentrum fur Chirurgie, Katharinenhospital Stuttgart, Kriegsbergstrasse 60, D-70174 Stuttgart, Germany.
SO Zeitschrift fur Orthopadie und Ihre Grenzgebiete, (1997) Vol. 135, No. 4, pp. 301-309.
Refs: 37
ISSN: 0044-3220 CODEN: ZOIGAP
CY Germany
DT Journal; Article
FS 033 Orthopedic Surgery

LA German
SL English; German
ED Entered STN: 22 Jan 1998
Last Updated on STN: 22 Jan 1998
AB Purpose: In the case of hip revision arthroplasty, cementless implants
combined with bone grafts are increasingly used to reconstruct the
acetabular bone stock. The study on hand reports about the results with
the trabecular orientated cup implant of CopflHolz after 10 years of
application. Method: A total of 256 hip revision arthroplasties were
prospectively recorded with a mean follow-up period of 5.6 years. For the
osseous augmentation of the acetabulum, autogenous bone was used in 227
cases, allogenic spongy bone in 15 cases and mixed bony materials in 8
cases. The clinical and radiological follow-ups were done after 3, 6, 12
months and then in 2-years intervals. Results: Within the 10 years
follow-up 3 rerevisions must be done because of deep infection, 6
rerevisions because of aseptic loosening or primary instable fixation.
The specific failure rate of the used cup implant amounts to 96.2% five
years after revision arthroplasty, and 86.8% ten years after revision
arthroplasty. Revealed from a radiological point of view, the
transplanted spongiosa showed in 83.5% a complete osseous integration one
year after the operation. Worse incorporation was conspicuous especially
when allografts or mixed bone grafts were used. Clinically, a permanent
improvement of motion, pain and walking ability was seen postoperatively.
91% of all follow-up patients were satisfied with the result of the
revision arthroplasty. Conclusions: The trabecular orientated cup implant
has proven itself worthy for cementless cup revision arthroplasty and will
be an alternative to the cups and rings used up to now for the
reconstruction of great acetabular bone deficiencies.

AN 1995354149 EMBASE
TI [Twenty years activity of Bone Banking in S. Martino Hospital, Genoa,
Italy].
VENTI ANNI DI ATTIVITA DELLA BANCA DELL'OSSO DEL SERVIZIO DI IMMUNOLOGIA
DELL'OSPEDALE SAN MARTINO DI GENOVA.
AU Costantini, M.; Lacagnina, R. (correspondence); Dessi, V.
CS Via delle Sacramentine, 2/8, 16145 Genova, Italy.
SO Minerva Ortopedica e Traumatologica, (1995) Vol. 46, No. 9, pp. 435-440.
ISSN: 0026-4911 CODEN: MOTRE8
CY Italy
DT Journal; Conference Article; (Conference paper)
FS 017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
033 Orthopedic Surgery
LA Italian
SL Italian; English
ED Entered STN: 28 Dec 1995
Last Updated on STN: 28 Dec 1995
AB The S. Martino Hospital Bone Bank, one of the first in Italy, was set-in
in 1971 as an activity of the Immunology Service; the Bank is still fully
operative in collaboration with several local and regional Orthopedic
Centers, with a total of 1531 femoral heads received between 1971 and 1993
and 609 effectively utilized for bone allografts. Improvements have been
made in the years to reach high standards of sterility and safety.
Personal data and medical history of the donors are carefully recorded and
serological and bacteriological investigations are carried out to
ascertain the absence of any transmissible disease of bacterial, viral or
unknown origin. Bones are immediately frozen under sterile conditions at
-80°C in polypropylene containers as soon as they arrive at the
Bank. Prior to storage, fragments taken from the surface and marrow
sections are cultured in both, aerobic or anaerobic specific media
to screen for sterility. Bones from suitable donors and negative for
microbiological tests are transferred in a deep-freezer and
stored without any further manipulation until they are used. Matching for
ABO and Rh blood groups, but not histocompatibility antigens (HLA) is

observed in selecting donor-recipient paires, particularly for female
recipients of child bearing age. Post-transplant problems due to toxic
side-effects, septic infections or graft-rejection reactions were never
observed in our many-year experience.

L23 ANSWER 18 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1995138772 EMBASE
TI The role of free pericranium grafts in augmentation rhinoplasty.
AU Ioannides, C., Dr. (correspondence); Fossion, E.
CS Department of Plastic Surgery, University College Hospitals, Mortimer
Street, London W1N 8AA, United Kingdom.
SO Journal of Cranio-Maxillo-Facial Surgery, (1995) Vol. 23, No. 2, pp.
105-108.
ISSN: 0301-0503 CODEN: JCMSET
CY United Kingdom
DT Journal; Article
FS 011 Otorhinolaryngology
009 Surgery
LA English
SL English
ED Entered STN: 23 May 1995
Last Updated on STN: 23 May 1995
AB Various tissues and materials have been used in augmentation rhinoplasty.
This paper presents a retrospective analysis of 14 patients, 8 female and
6 male, in whom free pericranium grafts were used in order to
restore postsurgery or posttraumatic nasal defects. There were no
complications from either the donor or the recipient site. The early and
medium term results were satisfactory. It is concluded that
free pericranium, compared with other autografts, is a good
alternative due to its several advantages and hardly any disadvantages.
In selected cases it can even be the material of choice.

L23 ANSWER 19 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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AN 1995038609 EMBASE
TI Ethylene oxide sterilization of bone grafts.:Residual gas concentration
and fibroblast toxicity.
AU Arizono, T. (correspondence); Iwamoto, Y.; Okuyama, K.; Sugioka, Y.

CS Department of Orthopedics, Faculty of Medicine, Kyushu University, Fukuoka
812, Japan.
SO Acta Orthopaedica Scandinavica, (1994) Vol. 65, No. 6, pp. 640-642.
ISSN: 0001-6470 CODEN: AOSAAK
CY Denmark
DT Journal; Article
FS 033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 15 Feb 1995
Last Updated on STN: 15 Feb 1995
AB We examined the concentration of ethylene oxide in bone allografts after
gas sterilization. Chips of the human femoral head were investigated,
Residual gas concentration was determined by gas chromatography after the
bone chips had been subjected to defatting and freeze-drying,
followed by ethylene oxide gas sterilization. Bones were prepared in
various ways in an attempt to reduce the concentration of residual
ethylene oxide. The concentration was higher when gas sterilization was
performed before freeze-drying than when it was done afterwards.
An experiment performed with fibroblasts showed the high toxicity of
residual ethylene oxide in bone chips, even when the concentration was
very low. The growth of fibroblast was reduced more in medium
which had been shaken with bones sterilized with ethylene oxide before
freeze-drying than in medium which had been shaken with
bones sterilized after freeze-drying. The higher residual
ethylene oxide concentrations resulted in a decrease in fibroblastic
culture activity. Our experiment showed the importance of reducing the
residual ethylene oxide gas concentration. Defatting and freeze
-drying result in lower residual ethylene oxide concentrations.

L23 ANSWER 20 OF 25 EMBASE
AN 1993086004 EMBASE
TI The induction of IL-1 by freeze-dried ethylene oxide-treated
bone-patellar tendon-bone allograft wear particles: An in vitro study.
AU Silvaggio, V.J., Dr. (correspondence); Fu, F.H.; Georgescu, H.I.; Evans,

C.H.
CS Ferguson Lab Orthopaedic Research, Univ Pittsburgh School of Medicine, 986
Scaife Hall, Pittsburgh, PA 15261, United States.
SO Arthroscopy, (1993) Vol. 9, No. 1, pp. 82-86.
ISSN: 0749-8063 CODEN: ARTHE3
CY United States
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 25 Apr 1993
Last Updated on STN: 25 Apr 1993
AB There have been recent reports of adverse clinical results with freeze-dried ethylene oxide-treated bone-patellar tendon-bone (FD-ETO-BPTB) allografts used in anterior cruciate ligament (ACL) reconstruction. Ethylene oxide and its residues were implicated as the cause of many of the failures. Wear particles generated from both freeze-dried ethylene oxidetreated and deep frozen bone-patellar tendon-bone (DF-BPTB) allografts were placed in culture with lapine synoviocytes. The resulting synovial conditioned media were then assayed for interleukin-1 (IL-1) content. IL-1 is a potent mediator of tissue inflammation. FD-ETO-BPTB wear particles generated statistically significant levels of IL-1 when compared with both a negative control and DF-BPTB wear particles.

L23 ANSWER 21 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 1988221582 EMBASE
TI Vascular medullary patency in free vascularized bone grafts: CT scan experimental study.
AU Gonzalez del Pino, J.; Knapp, K.; Gomez Castresana, F.; Benito, M.; Gutierrez de la Camara, A.; Canosa, R.; De Miguel, E.
CS Department of Orthopaedic Surgery, Hospital 'La Paz', Madrid, Spain.
SO Journal of Reconstructive Microsurgery, (1988) Vol. 4, No. 4, pp. 271-276.
ISSN: 0743-684X CODEN: JRMIE2
CY United States
DT Journal; Article
LA English
SL English
ED Entered STN: 11 Dec 1991
Last Updated on STN: 11 Dec 1991

AB In an experimental study using 13 mongrel adult dogs, 6 cm of the anterior
part of the left ninth rib were harvested, including the posterior
intercostal vessels. The grafts were transferred, based on the periosteal
circulation alone, to a previously induced femoral head ischemic necrosis.
Microsurgical anastomoses were performed between the posterior intercostal
vascular bundle and the caudal gluteal vessels at the recipient thigh
zone. Using a high resolution CT scan and morphologic evaluation, it was
demonstrated that the medullary circulation network filled on contrast
medium. The entire cortex and medullary cavity were supplied from
endosteal vessels coming from a reversed periosteal blood flow.

L23 ANSWER 22 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
reserved on STN
AN 1980030627 EMBASE
TI Collagen synthesis and degradation in embryonic chick-bone explants.
AU Sakamoto, M.; Sakamoto, S.; Brickley-Parsons, D.; Glimcher, M.J.
CS Dept. Periodontol., Harvard Sch. Dent. Med., Boston, Mass., United States.
SO Journal of Bone and Joint Surgery - Series A, (1979) Vol. 61, No. 7, pp.
1042-1052.
ISSN: 0021-9355 CODEN: JBJSA3
CY United States
DT Journal; Article
FS 033 Orthopedic Surgery
005 General Pathology and Pathological Anatomy
LA English
ED Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991
AB Studies of collagen biosynthesis and degradation were carried out in
embryonic chick-bone explants grown in tissue culture to determine whether
a large fraction of newly synthesized collagen was degraded without being
incorporated into bone. The incorporation of (3)H-proline into the
(3)H-hydroxyproline of bone collagen and into free
hydroxyproline and hydroxyproline-containing peptides released into the
culture medium was determined during eight days in culture. The

hydroxyproline content of embryonic chick bone increased 1.9-fold after
eight days in culture and the mineral content increased significantly.
Approximately one-half of the collagen synthesized was retained in the
bone and one-half was released into the tissue-culture medium.
The newly synthesized collagen accounted for almost all of the collagen
released into the medium; very little was derived from the
breakdown of structural collagen present in the fabric of the bone tissue
before explantation.

L23 ANSWER 23 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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AN 1978278886 EMBASE
TI [Bone bank of the orthopedic clinic, Karl Marx University (Leipzig)].
DIE KNOCHENBANK DER ORTHOPADISCHEN KLINIK DER KARL-MARX-UNIVERSITAT
LEIPZIG.
AU Knoefler, E.W.
CS Orthop. Klin., Karl-Marx-Univ., Leipzig, German Democratic Republic.
SO Beitrage zur Orthopadie und Traumatologie, (1978) Vol. 25, No. 2, pp.
72-80.
ISSN: 0005-8149 CODEN: BOTRAJ
CY German Democratic Republic
DT Journal
FS 017 Public Health, Social Medicine and Epidemiology
033 Orthopedic Surgery
009 Surgery
LA German
AB All that is required for a bone bank is a medium-sized
freezer. Operation costs are minimal. Good cooperation with an
institute of forensic medicine is necessary. The deep-freezing
technique is simplest and gives mechanically and biologically optimal chip
material. A report is presented of more than 20 years' experience of the
orthopedic clinic of the Karl Marx University, Leipzig, with approx. 2500
implantations of chips of cortical and spongy bone. The material offers
many advantages over bone autografts; the many applications developed over
the years are described. Given adequate preparation and skillful surgical
technique, the rate of infection is not higher than for other comparable

operations. A number of special methods with which particularly good
results have been obtained are described.

L23 ANSWER 24 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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AN 1977192605 EMBASE
TI Results of surgical obliteration of the tympanic bulla of rabbits by means
of free bone autotransplants (Russian).
AU Melaniyin, V.D.; Botpaev, A.K.
CS Kaf. Bol. ORL, Tsent. n.i. Lab., I Med. Inst., Moscow, USSR.
SO Vestnik Oto-Rino-Laringologii, (1976) Vol. 38, No. 6, pp. 34-38.
ISSN: 0042-4668 CODEN: VORLA7
DT Journal
FS 011 Otorhinolaryngology
LA Russian
AB The authors present the dynamics of reparative reconstruction of autobone
implanted in the finely ground condition into the tympanic bulla of
rabbits. Chronic purulent otitis was induced. Obliteration of the bulla
was carried out not earlier than 1.5 mth after the infection. The bone
for grafting was recovered from the posterior limb of the animals.
Morphological studies demonstrated that the slits between the implanted
bone fragments were filled with connective tissue in the course of the
immediate postoperative month. The transplanted bone tissue was resolved,
and stimulated the osteogenesis. The first signs of osteogenesis were
revealed by the end of the month after the transplantation, and in 6-9 mth
the bullae proved to be completely obliterated by the regenerated bone, at
first spongy and later compact. The authors believe bone tissue to be one
of the optimal materials for the surgical obliteration of the trephine
cavities in the middle ear of patients. Reliable surgical treatment and
complete removal of the mucosa of the mastoid process cells are conditions
which should be observed to obtain favorable results; the bone
graft should be placed in such a way that it is completely
surrounded with the recipient's bone and does not come into contact with

the soft tissues; at the early postoperative period suitable conditions
for the outflow of the discharge should be created; antibiotics must be
prescribed for healing the soft tissue wound. Cavities formed as a result
of previous operations should not be filled with bone tissue.

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AN 1977188633 EMBASE
TI [The Kiel bone graft for repair of cranial vault defects].
DEFEKTDECKUNG AM SCHADELDACH MIT KIELER KNOCHENSPAN.
AU Magistris, F.
CS Chir. Abt., Krankenh. Hollabrunn, Austria.
SO Chirurgische Praxis, (1976) Vol. 21, No. 3, pp. 365-370.
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DT Journal
FS 011 Otorhinolaryngology
008 Neurology and Neurosurgery
LA German
AB For the primary cover of minor cranial vault defects (bore hole size up to
6.5 x 4.5 cm) as occur in emergency surgery, spongiosa slices (Kiel bones)
were used between 1967 and 1973 in 12 patients. Two cases illustrate the
simple and complication free technic, in particular, the absence
of effect of the nutrient medium of the macerated bone, but they
also indicate the limits of the method and the fate of such a graft in a
callus weak bone support because of failure of the incursive replacement
and osseous inclusion to appear. In the area of the cranial vault primary
cover with spongiosa slices should therefore remain confined to the order
of magnitude of about 30 x 30 mm.

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